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ANNUAL REPORT OF FIELD PLANTINGS IN NORTH DAKOTA 1986



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1986 Report of
Plant Materials Field Plantings
in
North Dakota

by

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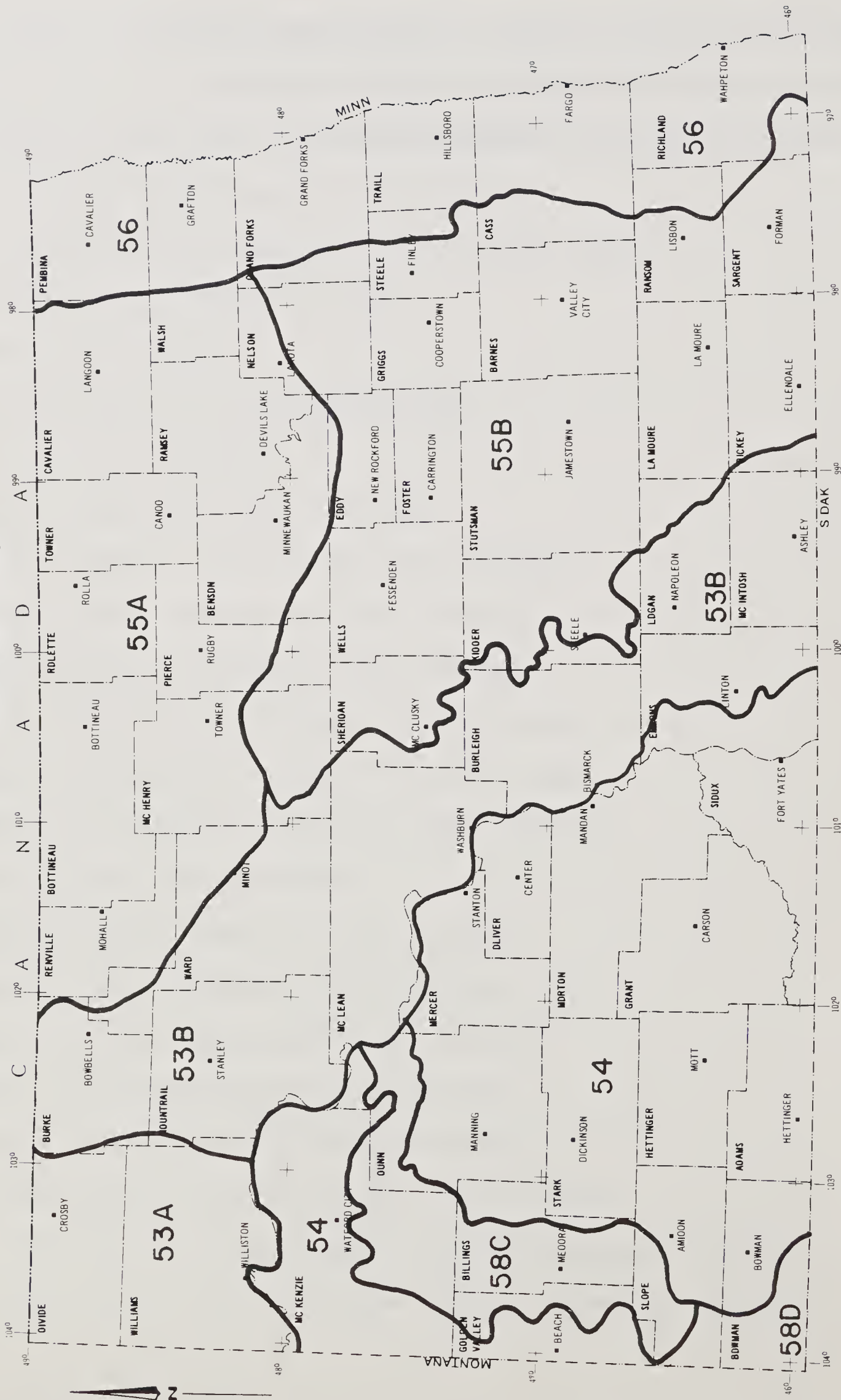
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LAND RESOURCE AREA MAP NORTH DAKOTA NOVEMBER 1979



LEGEND

- 56 RED RIVER VALLEY OF THE NORTH
- 55A NORTHERN BLACK GLACIATED PLAINS
- 55B CENTRAL BLACK GLACIATED PLAINS
- 53A NORTHERN DARK BROWN GLACIATED PLAINS
- 53B CENTRAL DARK BROWN GLACIATED PLAINS
- 54 ROLLING SOFT SHALE PLAIN
- 58C NORTHERN ROLLING HIGH PLAINS, NORTHEASTERN PART
- 58D NORTHERN ROLLING HIGH PLAINS, EASTERN PART
- LAND RESOURCE AREAS

This report is prepared to summarize the plant materials field and seed increase planting activities in North Dakota.

Field plantings are the final evaluation of plants and techniques that have demonstrated superiority in studies at the PMC or in field evaluation plantings. These plantings will determine potential of the plants under actual use conditions and provide valuable data to document release as a new cultivar. Seed increase plantings are established to provide commercial supplies of conservation plants.

A long range plan has been developed on each plant, based on input by the Plant Materials Specialist and area and state specialists. Field planting long range plans project the number, size, purpose, location, seed need, and evaluations for the accession in final testing. Field planting long range plans are updated each year and consideration is given to other potential field plantings as they arise, if they meet the objectives of the long range plan. The Plant Materials Specialist works with the district conservationists, area and/or state staff in laying the ground work for each planting. (Refer to Long Range Plans and Planting Guides for current high priority needs for field planting sites.)

By definition all herbaceous field plantings will be considered active for three years; tree and shrub plantings for five years and then transferred to the inactive list. Inactive planting records will be maintained indefinitely in the field office file. Follow-up evaluations will be made of selected species and/or accessions at the request of the State PM Committee. All active field plantings were evaluated in 1986 (see list of active plantings). In addition, high priority will be given to evaluate inactive plantings of the following species:

ND-14	harbin pear	ND-83	late lilac
ND-283	Russian almond	ND-11	amur honeysuckle
ND-444	indiangrass	ND-629	amur maple
NDG-4	big bluestem	ND-95	prairie sandreed
NDG-965-98	switchgrass	ND-93	green needlegrass

There are several elements of a successful planting:

1. Conservation district supervisors are involved in planning, selecting cooperators, monitoring, and publicizing results of the planting.
2. The cooperator is fully informed about the objectives of the planting, and understands the culture and management required for a successful planting.
3. The planting should be of a size which can be a management unit and part of a planned RMS.
4. The planting fits with district objectives and field office goals.
5. SCS technicians or specialists provide the systematic follow-up in the establishment, maintenance, and evaluation of the planting.

Cooperation from area and field office personnel has been excellent. Establishment, management, and evaluation of the type and number of field plantings needed to properly test a superior plant selection would be impossible without their help.

Of special interest in this and future reports should be the summary reports that have been generated from data received from field plantings. These are examples of reports that can be generated from the plant materials data base system. The data can be sorted in many other ways. These reports should give field office personnel an opportunity to see how their plantings are performing in comparison with others in the state under a variety of situations. Data for other species or from other states in the PMC service area is available upon request.

HIGHLIGHTS OF ACTIVITIES AT THE BISMARCK PLANT MATERIALS CENTER

The USDA Plant Materials Center, Bismarck, North Dakota primarily serves the states of North Dakota, South Dakota and Minnesota. Activities are directed toward meeting the needs and priorities set forth in the 3 states long-range programs.

The objectives and functions of the Plant Materials Center are to:

1. Identify, select and improve plants to meet the resource conservation needs of the three states.
2. Determine cultural techniques for successful propagation and establishment of these plants.
3. Assemble and comparatively evaluate materials on and off the center.
4. Make comparative field plantings for final testing of promising plants and techniques with Conservation Districts and cooperators.
5. Work with Universities, Experiment Stations, and other State and Federal Agencies to cooperatively release improved conservation plants.
6. Produce limited quantities of foundation or foundation quality seed. This seed is made available to Conservation Districts, State Seed certifying organizations, commercial seed growers, or other agencies for establishing seed increase fields or seed orchards.
7. Encourage Conservation Districts, commercial seed growers, and commercial and state nurseries to produce adapted plant materials and named cultivars.

TREE AND SHRUB IMPROVEMENT

Within the three states, there is a need to improve the quality and quantity of species available for field and farmstead windbreaks, erosion control on cropland and critical areas, surface mine reclamation, recreational areas, wildlife habitat, and barrier plantings. The objective of the woody improvement program is to assemble, evaluate, increase and release cultivars with improved survival, growth rates, form, winter hardiness, fruit production, disease resistance or other valuable characteristics. Most projects are cooperative with various state, local and federal agencies, tree improvement foresters, scientists, and others with similar objectives.

Field Evaluation Plantings (multi-species).

The SCS has entered in memorandums or agreements with soil conservation districts, state universities and other state and federal agencies at thirteen locations in North Dakota, South Dakota and Minnesota to provide cooperative field evaluation planting sites with long term land tenure for testing of woody plant materials. These agreements provide sites for initial evaluation of species and cultivars under diverse soil and climatic conditions. They represent major land resource areas and key windbreak suitability groups. Initial evaluations are recorded on individual spaced plants or rows under uniform culture and management conditions.

- Project 38I302K - North Dakota Game and Fish Department, McKenzie Slough Game Management Area, McKenzie, North Dakota. Soil series- texture: Savage silty clay loam, MLRA: 053B, WSG: 3; 338 accessions of 126 species.
- Project 38I305K - Herman Brothers Farm, Brinsmade, North Dakota. Soil series-texture: Svea-Buse loam, MLRA: 055A, WSG: 1, 8; 153 accessions of 59 species.
- Project 38I308K - North Dakota State University, Bottineau Branch, Bottineau, North Dakota. Soil series-texture: Barnes-Aastad Complex, MLRA: 055A, WSG: 3; 130 accessions of 57 species.
- Project 38I316K - North Dakota State University, Dickinson, Branch Experiment Station, Dickinson, North Dakota. Soil series-texture: Parshall fine sandy loam, MLRA: 054, WSG: 5; 61 accessions of 35 species.
- Project 38I321K - North Dakota State University, Williston Branch Experiment Station, Williston, North Dakota. Soil series-texture: Williams loam, MLRA: 053A, WSG: 3; 28 accessions of 19 species.
- Project 38I323K - Morton County Parks, Sweet Briar Recreation Area, Mandan, North Dakota. Soil series-texture: Stady loam, MLRA: 054, WSG: 6; 79 accessions of 63 species.
- Project 38I314K - USDI, Fish and Wildlife Service, National Wildlife Refuge, Lake Andes, South Dakota. Soil series-texture: Highmore silt loam, MLRA: 055C, WSG: 3; 84 accessions of 45 species.
- Project 38I319K - U.S. Forest Service, Buffalo Gap National Grassland, Cottonwood, South Dakota. Soil series-texture: Kyle silty clay, MLRA: 060A, WSG: 4; 67 accessions of 46 species.
- Project 38I315K - South Dakota State University Central Research Station, Highmore, South Dakota. Soil series-texture: Williams silt loam, MLRA: 053C, WSG: 3; 118 accessions of 56 species.
- Project 38I318K - University of Minnesota, West Central Experiment Station, Morris, Minnesota. Soil series-texture: Barnes-Buse loam, MLRA: 102A, WSG: 3, 8; 89 accessions of 52 species.
- Project 38I320K - University of Minnesota, Northwest Experiment Station, Crookston, Minnesota. Soil series-texture: Bearden silty clay loam, MLRA: 056, WSG: 1; 56 accessions of 38 species.
- Project 38I325K - University of Minnesota, Westport, Minnesota, Center Pivot Irrigation System. Soil series-texture: Esterville sandy loam, MLRA: 91, WSG: 7; 21 accessions of 18 species.
- Project 38I340K - Minnesota Department of Natural Resources, Rochester, Minnesota. Soil series-texture: Mt. Carrol silt loam, MLRA: 105; 79 accessions of 33 species are planned for establishment.

Current Status: Assembly and evaluation continues for each project. The following accessions show potential for further evaluation and release:

<u>Accession Number</u>	<u>Genus/species</u>	<u>Origin/source</u>
ND-654 5652T	silver maple <u>Acer saccharinum</u>	Pembina Co., ND
SD-13 5888T	green ash <u>Fraxinus pennsylvanica</u>	Potter Co., SD
SD-156 5890T	green ash <u>Fraxinus pennsylvanica</u>	Deuel Co., SD
ND-647 5887T	black ash <u>Fraxinus nigra</u>	Res. Sta., Morden, MB, Canada
ND-630 6096T	bur oak <u>Quercus macrocarpa</u>	Barnes Co., ND
Mich-768 12606T	horizontal juniper <u>Juniperus horizontalis</u>	USDA-SCS, PMC, East Lansing, MI
ND-25 5741T	downy hawthorn <u>Crataegus mollis</u>	NDSU, Fargo, ND
PI-370126	willow <u>Salix sp.</u>	Plant Introduction Sta., Ames, IA
ND-21 34900T	nannyberry <u>Viburnum lentago</u>	USDA, ARS, Mandan, ND
SD-131 6073T	mayday <u>Prunus padus</u>	Moody Co., SD
ND-1029 6086T	chokecherry (yellow fruit) <u>Prunus virginiana</u>	Logan Co., ND
ND-3905 35215T	dwarf artic willow <u>Salix purpurea nana</u>	NDSU, Fargo, ND
ND-3904 35214T	blue fountain willow <u>Salix sp.</u>	NDSU, Fargo, ND
ND-3745 19584T	forsythia <u>Forsythia europea x. ovata</u>	P.I. Sta., Ames, IA
ND-428 5970T	black walnut <u>Juglans nigra</u>	NDSU, Fargo, ND
ND-450 6119T	Redman elderberry <u>Sambucus racemosa</u>	USDA, ARS, Cheyenne, WY

<u>Accession Number</u>	<u>Genus/species</u>	<u>Origin/source</u>
ND-500 5977T	Siberian larch <u>Larix sibirica</u>	Res. Sta., Morden, MB Canada
ND-673 6214T	mountain ash <u>Sorbus aucuparia</u>	Res. Sta., Morden, MB, Canada
PI-323957	black chokeberry <u>Aronia melanocarpa</u>	P.I. Sta., Ames, IA
ND-1134 47203T	hardy plum <u>Prunus sp.</u>	W. Hermann, Miller, SD
ND-3779 29137T	Manchurian poplar <u>Populus sp.</u>	Lee Nursery, Fertile, MN
'Darts Golden' 19601T	dwarf ninebark <u>Physocarpus opulifolius</u>	P.I. Sta., Ames, IA
ND-3744 19577T	Korean barberry <u>Berberis sp.</u>	NDSU, Fargo, ND

Tree and Shrub Seed Source Studies and Assemblies. These studies involve (1) a search for superior trees and shrubs in natural stands, shelterbelts and plantings of known origin; (2) initial evaluation in test plantations on sites selected to represent major land resource areas or seed zones; (3) selection and increase of superior plants (seed increase crossing blocks); (4) advanced studies to determine cultural methods; and (5) final testing in field plantings to further evaluate performance and area of adaptation.

Project 38I015J - Evaluation of chokecherry, (Prunus virginiana). In 1979, SCS field office personnel were instrumental in locating stands and collecting a total of 179 accessions from North Dakota, South Dakota and Minnesota. Without their concerted effort and cooperation such large scale assemblies would not be possible. Seedlings grown at the PMC were transplanted in the spring of 1983 into test plantations near Bismarck and Pierre. Experimental design is a randomized block with some blocks incomplete. Accessions are replicated 5 times with 4 trees per replication. Survival at the North Dakota site was 95% in 1985. One hundred fifty of the original 179 accessions were established. Survival totaled 61% at the South Dakota planting in 1984. In North Dakota, chokecherry growth rates ranged from 33 to 71 cm/year. Heights reached up to 290 cm (9.5 feet) in 1986. Both tree-like and dense suckering forms are apparent. Differences in size and growth rates based on north-south latitudinal origin are not yet visible at this early age. Plans are to inoculate the South Dakota plantation with western-X disease in order to screen the population for resistance to this serious pathogen. Dr. Glenn Peterson, Plant Pathologist, USDA Forest Service, Lincoln, NE, will conduct the inoculation. Survival, vigor, plant height, and crown width were recorded in 1986.

Project 38I012J - Evaluation of silver buffaloberry, (Shepherdia argentea). SCS field personnel collected 134 accessions in North Dakota and South Dakota in 1977-79. Four additional accession were obtained from the Canada Agriculture Research Station, Morden, Manitoba. Seedlings grown at the PMC were transplanted into test plantations near Bismarck and Pierre in the spring of 1983. Experimental design is the same as the chokecherry project. The South Dakota planting has been discontinued because of poor survival. Survival at the North Dakota site was 85% in 1985. Out of the original assembly, 101 accessions are represented. Growth rates averaged 17 to 54 cm/year. Several accessions have exceeded heights of 250 cm (8 feet) in 1986. Survival, vigor, plant height, and crown width were recorded in 1986.

Project 38I013J - Evaluation of hawthorn, (Crateagus sp). SCS field personnel collected seed from 139 accessions in North Dakota and South Dakota in 1976-79. An additional 45 collections of introduced species were obtained from the Canada Agriculture Research Station, Morden, Manitoba. Seedlings were transplanted into test plantations near Bismarck and Pierre in 1983. Experimental design is the same as the chokecherry and buffaloberry projects. From the original assembly, 75 native and 31 introduced accessions were established. Survival at the North Dakota site was 98% in 1985. Unfortunately, because of poor survival the South Dakota planting has been discontinued. Despite moderate deer browse, growth rates in North Dakota averaged 15 cm/year, ranging from 0 to 23. Some accessions have exceeded a height of 125 cm (4.0 feet) in 1986. Introduced species are generally more vigorous at this early stage. Survival, vigor, plant height, crown width, and disease and insect resistance were recorded in 1986.

Project 38I333K - Evaluation of hackberry, (Celtis occidentalis).
GP-13 Technical Committee Cooperative Provenance Test.

Dr. Richard A. Cunningham, Study Coordinator, USDA-ARS, Mandan, ND.

Objectives of the study:

1. Identify the extent and patterns of genetic variability within hackberry growing in ND, SD, MN, NE, IA, MO, KS, OK, AR and Manitoba, Canada.
2. To identify the seed sources of hackberry best adapted for planting in ND, SD, MN, NE, IA, MO, KS, OK, and AR.
3. To provide a highly variable gene pool that could be utilized for future selections and breeding.

Current Status: The assembly of seed sources is now complete. A total of 293 (4 in 1979, 58 in 1982, 86 in 1983, 98 in 1984, 47 in 1985) field collections were processed at the USDA-SCS, PMC, Bismarck, North Dakota. Clean seed amounts range from 8 to 3,439 grams. The PMC greatly appreciates the positive response and excellent cooperation from most states and SCS personnel assisting with the collections. Only a small number of zones in the study area were inadequately sampled or not collected. Seed lots from fifty of the 55 designated zones encompassing 9 states and the Province of Manitoba, Canada were received.

North Dakota	23 Collections - (2-1979, 14-1982, 0-1983, 0-1984, 7-1985)
South Dakota	39 Collections - (2-1979, 6-1982, 4-1983, 15-1984, 12-1985)
Minnesota	29 Collections - (9-1982, 11-1983, 0-1984, 9-1985)
Nebraska	69 Collections - (14-1982, 31-1983, 16-1984, 8-1985)
Kansas	56 Collections - (11-1982, 17-1983, 24-1984, 4-1985)
Oklahoma	19 Collections - (3-1982, 4-1983, 11-1984, 1-1985)
Iowa	29 Collections - (0-1982, 19-1983, 9-1984, 1-1985)
Missouri	24 Collections - (0-1982, 0-1983, 23-1984, 1-1985)
Arkansas	4 Collections - (4-1985)
Canada	1 Collection - (1-1982)

A total of 219 accessions (4 replications each) were planted at the USDA-SCS PMC, Manhattan, Kansas in November, 1986. One year old bareroot seedlings will be raised and shipped to cooperating researchers for establishment in 17 or more test plantations in the central and northern plains. According to germination tests conducted by the ARS, potential production is 193,000 seedlings.

Selection and increase of superior plants (seed orchards)

Project 38S317K USDI, Fish and Wildlife Service, Apple Creek Township, Burleigh County, North Dakota.

Current status: Forty to fifty plants of each of the following accessions have been established in a spaced plant isolated seed orchard. Seed harvested from this orchard will be provided to nurseries when varieties have been released for commercial production.

'Cardan'	green ash
(469226)	<u>Fraxinus pennsylvanica</u>
'Midwest'	Manchurian crabapple
(478000)	<u>Malus baccata mandshurica</u>
'Big Horn'	skunkbush sumac
(483445)	<u>Rhus trilobata</u>
'Oahe'	hackberry
(476982)	<u>Celtis occidentalis</u>
ND-14	Harbin pear
(478004)	<u>Pyrus ussuriensis</u>

ND-313 red tatarian honeysuckle
(477999) Lonicera tatarica sibirica

ND-629 amur maple
(477992) Acer ginnala

'Sakakawea' silver buffaloberry
(478005) Shepherdia argentea

'Scarlet' Mongolian cherry
(478003) Prunus fruticosa

SD-131 Mayday
(6073T) Prunus padus

ND-177 cotoneaster
(5729T) Cotoneaster integerrima

ND-1134 hardy plum
(47203T) Prunus sp.

Final Evaluation and Release Schedule - Woody:

<u>Accession No.</u>	<u>Species</u>	<u>Projected Year of Release</u>
ND-177 PI-113095	European cotoneaster <u>Cotoneaster integerrima</u>	1986-87
ND-11 PI-477998	amur honeysuckle <u>Lonicera maackii</u>	1987-88
ND-20 5731T	Arnold hawthorn <u>Crataegus arnoldiana</u>	1988-89
ND-629 PI-477992	amur maple <u>Acer ginnala</u>	1988-89
ND-1879 11850T	honeylocust <u>Gleditsia triacanthos</u>	1989-90
ND-83 6228T	late lilac <u>Syringa villosa</u>	1989-90
ND-283 6079T	Russian almond <u>Prunus tenella</u>	1989-90
ND-14 PI-478004	harbin pear <u>Pyrus ussuriensis</u>	1988-89

GRASS IMPROVEMENT

Native grasses and closely related introduced species are needed for critical area stabilization, erosion control, wildlife habitat, pasture and hayland, rangeland and surface mine revegetation. Adapted cultivars are still needed for many warm and cool season species in the 3 state area. Emphasis of the PMC selection program is placed on erosion control, improving forage quantity and quality, identifying adapted, winter hardy seed sources capable of maintaining high stand density, and increasing seed production and disease resistance. The PMC also cooperates on projects with research agencies such as ARS who employ plant breeders to improve the quality of forages available in the Northern Plains. In addition, evaluations are conducted off center by the PMC in cooperation with state and federal land management agencies.

Field Evaluation Plantings (multi-species): The objective is to determine the adaptation and performance of selected species and varieties of warm season native grasses to be evaluated under uniform culture and management.

Project 38A327J USDI-FWS, Fergus Falls, Minnesota. Thirty-three accessions of warm season species, established in June 1982. The planting plan is a randomized complete block with 3 replications, and an array for demonstrational purposes. Stands-excellent. Data collected included plant density, plant height, weed competition and stand rating. Forage yield was sampled in 1983-1986. Annual production was down in 1985 and 1986, although moisture conditions were good. Soil samples were collected to check fertility levels. Very obvious differences in maturity were noted between the northern and southern sources of each species.

Project 38A328J USDI-FWS, J. Clark Salyer NWR, Upham, North Dakota. Thirty-three accessions of warm season species, established in June 1982. The planting plan is the same as Fergus Falls (see above). Stands-excellent. Data collected included plant density, winter injury, plant height, weed competition and stand rating. Forage yield was sampled in 1983-1986. Forage production has been excellent, especially for the northern cultivars. Winter injury was noted in southern sources of big bluestem, indiangrass, and little bluestem. Southern sources of switchgrass did not seem as affected by winter injury as the other species but delayed maturity was apparent.

Project 38A334J USDI-FWS, Lake Andes, South Dakota. Thirty-two accessions of warm season species, established in June 1983. The planting plan is a randomized complete block with three replications, plus a demonstration array. Stands-good to excellent. During 1983, stand ratings were the only evaluations conducted. Plant density, phenology and forage yield were collected in 1984-1986. Northern sources were generally low in production. Maturity differences were again readily apparent. The plots were burned in 1986. Some of the more southern sources had excellent forage production in 1986. 'Holt', 'Oto', and 'Osage' indiangrass produced 5 ton/acre of oven dry forage. 'Summer' switchgrass was also in that range.

Project 38A337X US Army Corps of Engineers, Ft. Pierre, South Dakota. Thirty-three accessions of warm season species were established May 27-30, 1986. The planting plan is a randomized completed block with three replications, plus a demonstration array. Stand establishment was good-excellent. Data collected in 1986 included stand density, stand rating, plant height, weed competition, and stand emergence. Stand density estimates ranged from 2 to 34 plants/ft². The stands looked good going into winter; however, severe surface cracks on the Promise clay soil may cause some plant loss.

Project 38A336X Sully County, South Dakota. Thirty-two accessions of warm season grasses were established in randomized blocks seeded May 23-24, 1984. First year stands were fair-excellent. Density ratings ranged from 7 to 29 plants/sq. ft. Data collected included density, stand rating, plant height, and weed competition. Annual forage production and phenology were documented in 1985. Moisture conditions were poor in 1985 and forage production was low. Most northern sources were rated poor in performance. Improved moisture conditions in 1986 resulted in excellent production. Some of the switchgrass entries produced more than 4 ton/ac of oven dry forage.

Project 38A335X Minnesota Dept. of Natural Resources, Rochester, Minnesota. Thirty-seven accessions of warm season grass were established in randomized blocks seeded June 4-6, 1985. Eastern gamagrass and caucasian bluestem were also included in the evaluation. Density ratings, plant height and weed contamination were documented August 20-21, 1985. Stands were rated fair to excellent. Weed competition was heavy on some plots. Data collected in 1986 included stand index, height, and weed competition. Density estimates ranged from 2 to 24 plants/ft². Forage production will be sampled in 1987.

Major Assemblies of Native Grasses. Since 1977 the PMC has conducted four large scale assemblies of native grasses with the assistance of SCS field office personnel. These individuals located natural (native) stands then collected and shipped the vegetative subsamples. Nursery maintenance and evaluation work will be or has been performed by PMC personnel for 2 projects (little bluestem and big bluestem), while 2 others (western wheatgrass and blue grama) are handled by ARS plant breeders.

Project 38I338G. Assembly and evaluation of big bluestem, (Andropogon gerardii).

Objective: Assemble, evaluate, develop, and release cooperatively and adapted variety and/or varieties of big bluestem for conservation use in the following MLRA's: 56, 57, 88, 90, 91, 93, 102A, 102B, 103, 104, and 105.

Collection: October 15-18, 1985

Transplant Date: May 27 - June 13, 1986

Status: A total of 326 accessions were collected in Minnesota and eastern South Dakota. Individual plantlets were separated, transplanted into conetainers, and grown in the PMC greenhouse from March to May, 1986. More than 4,000 individual plants were transplanted to an initial evaluation nursery at the ARS Station at Mandan, ND. Survival was excellent. The nursery will be irrigated in 1987 to simulate the higher rainfall conditions where the plants originated. Data collected in 1987 will include survival, vigor, disease, plant size, and leafiness.

Project 38I010H Evaluation of western wheatgrass, Agropyron smithii

Project 38I011H Evaluation of blue grama, Bouteloua gracilis

Cooperators: The USDA, Soil Conservation Service (SCS), Plant Materials Center, Bismarck, ND, in cooperation with USDA-Agricultural Research Service (ARS), Northern Great Plains Research Center, Mandan, ND, and the Office of Surface Mines (OSM). Dr. Reed Barker, Plant Geneticist, is study coordinator.

Assembly: The initial phase involved the assembly and planting of vegetative field collections of western wheatgrass and blue grama from the western and Northern Great Plains Land Resource Areas 53, 54, 58, 60, 61, and 63 in North and South Dakota.

Current status: The assemblies of western wheatgrass and blue grama were completed during 1977. The projects were designed to systematically sample the ecotypic variation that occurs in these two species in western North and South Dakota. A total of 10,350 vegetative samples were collected by the SCS during September 1977. Five samples of each species were collected on 549 sites in South Dakota and on 486 sites in North Dakota.

Western wheatgrass

Initial evaluation notes were recorded by USDA-ARS on all plants in 1979. One thousand plants of western wheatgrass were selected for further evaluation and were transplanted to an advanced evaluation nursery in 1980. No data was recorded in 1981. In 1982 data collection on the selected plants included length of spread, density of spread and coloration. In 1983 a further 20% selection was made and seed collected from these plants will be planted in the greenhouse and evaluated for seedling vigor. Four hundred superior plants times 5 replications for a 2,000 total of plants were established vegetatively in the spring of 1984. This was the third cycle of recurrent selection used to identify superior plants. In 1985, data was collected from this third generation on the same agronomic traits recorded during earlier generations. Seed from the third cycle selection will be made available for testing in 1987.

Blue grama

Initial evaluations have been made on the assembly in 1981-82 and inflorescences from selected plants were collected for further study of apomixis. ARS personnel are developing a technique to determine degree of apomixis. No further progress has been reported by ARS in 1984. The PMC assisted with maintenance of the nursery in 1984 and 1985. In 1985, an initial selection of superior plants (top 10%) was made by Dr. Reed Barker (USDA-ARS). Vegetative plugs were removed with the assistance of the PMC. ARS personnel transplanted this material into cone-tainers in the greenhouse for outplanting in 1986.

Selection and Initial Seed Increase

Project 38I016H Initial increase of little bluestem Schizachyrium scoparium.

Cooperators: The USDA, Soil Conservation Service (SCS), Plant Materials Center, Bismarck, ND, in cooperation with the Office of Surface Mining (OSM).

Assembly: The initial phase involved the assembly and processing of vegetative field collections of little bluestem representative of the following Major Land Resource Areas in North Dakota, South Dakota and Minnesota: 53B, 53C, 54, 55A, 55B, 55C, 56, 57, 58C, 58D, 60, 61, 62, 63, 64, 66, 90, 91, 102A, 102B, 103, 104 and 105.

Current Status: Many of you in the field and area offices were involved in the initial assembly of little bluestem in ND, SD, and MN in 1979. The project has progressed well on schedule. More than 7,000 individual plants were evaluated from 1980-83. Superior plants were selected in 1983 and transplanted into isolated crossing blocks in June 1984. Plants were selected based on vigor, leafiness, disease resistance, plant size, and maturity. Because of the ecotypic variation and maturity differences, the selected plants were placed into 4 groups closely associated with the divisions in Major Land Resource Areas. These 4 regions are: 1. eastern North Dakota and north Central South Dakota, (ND-4114, a composite of 58 plants), 2. Western Dakotas (ND-4115, 68 plants), 3. eastern South Dakota and southern Minnesota (ND-4116, 76 plants), and 4. central and northeast Minnesota (ND-4117, 14 plants). Four separate germplasm blocks have been established. In 1985 a 5th group of short, early maturing plants were selected and established in an isolated crossing block. This composite will be tested for use as low maintenance cover in recreational area developments, transportation corridors and critical areas. Also in 1985, with the assistance of Dr. Jim Karns, Research Animal Scientist, USDA-ARS, Mandan, ND, 14 out of the total 68 plants from group 2 were sub-selected on the basis of higher protein content and digestability. These individuals (Group 6) will be increased and established in another crossing block in 1987.

Besides little bluestem, the following grasses were selected in 1984 and are now being increased in small breeder blocks or initial increase fields:

Project 38A111S - Initial seed increase of ND-3743 switchgrass. Established at the USDA-ARS Station, Mandan in 1982. Tall leafy, accession, maturing earlier than NDG-965-98. Collected by D. Strum, U.S. Fish and Wildlife Service, in 1980. Collected from a field of Nebraska-28 switchgrass.

Project 38A113S - Initial seed increase of ND-2100 European dunegrass. Strongly rhizomatous, vigorous grass with potential for stabilizing sandy soils, blowouts and other critical areas. Breeder block planted in 1984. Field expanded in 1985. Introduced from Europe.

Project 38A118S - Initial seed increase of ND-1105, sand bluestem. Uniform, open, spreading, sand bluestem with potential for native pasture on sandy sites. Pronounced pale blue color with villous (hairy) racemes. Breeder block established at PMC in 1985.

Final Evaluation and Release Schedule - Grasses:

<u>Accession No.</u>	<u>Species</u>	<u>Projected Year of Release</u>
Forestburg (SD-149) PI-478001	switchgrass <u>Panicum virgatum</u>	1986-87
Bonilla (SD-27) PI-315658	big bluestem <u>Andropogon gerardii</u>	1986-87
Tomahawk (ND-444) PI-478006	indiangrass <u>Sorghastrum nutans</u>	1987-88
NDG-4 PI-477994	big bluestem <u>Andropogon gerardii</u>	1987-88
NDG-965-98 PI-478002	switchgrass <u>Panicum virgatum</u>	1987-88
ND-95 PI-477995	prairie sandreed <u>Calimovilfa longifolia</u>	1992-93

FORB IMPROVEMENT

Forbs are an integral part of the native plant community in the Northern Great Plains. Identified seed sources or cultivars are needed for the revegetation of surface mined lands, wildlife habitat as well as the stabilization and beautification of disturbed areas, recreational developments and transportation corridors. Native forb and legumes from the Dakotas and Minnesota were assembled and evaluated from 1977 through 1983. Selected plants have since been transplanted or grown from seed in order to establish initial seed increase fields.

Selection and Initial Seed Increase

Project 38A109S - Initial seed increase of ND-3959 Maximilian sunflower.

Project 38A110S - Initial seed increase of ND-3651 Maximilian sunflower.

Selections were made in 1983 from an original assembly of 52 sources. Two accessions of Maximilian sunflower were established in separate fields at the PMC in 1983 and expanded in 1984. ND-3959 is a composite of 5 plants that mature earlier than ND-3651. This perennial warm season forb is best suited to moist sites and deeper soils. Maximilian sunflower is highly palatable and of good forage quality. The seeds are heavily utilized by song birds and other wildlife.

Project 38A123S - Initial seed increase of 47233T stiff sunflower. A composite of several accessions from North and South Dakota. This perennial warm season forb is adapted to dry, shallow soils and is highly palatable. One row was vegetatively established in 1986 for seed increase.

Project 38A119S - Initial seed increase of ND-1481 purple prairie clover. Originated from Lyman County, South Dakota. This perennial legume provides high quality forage as part of a range seeding mixture. Vegetative transplanting for seed increases will be done in 1987.

CULTURAL EVALUATIONS/SPECIAL PROJECTS

Evaluation of cultural production and establishment techniques are necessary for those species and cultivars where knowledge of effective propagation and increase methods are lacking. Demonstration plantings can serve this purpose, while simultaneously fulfilling an integral part of the information program. Informal trials or special studies on grass seeding techniques, grafting or rooting, seed stratification, and equipment application or modification are typical endeavors.

Project 38A409K - Evaluation and treatment of dormancy in bareroot seedlings of hackberry. Bareroot seedlings propagated by standard nursery practices have exhibited a high or highly variable degree of dormancy once outplanted. This apparent dormancy prevents seedlings from breaking bud in the normal (natural) amount of time, thereby increasing plant stress and reducing winter survival. To address this problem, the PMC is cooperating with Dr. Rich Cunningham (ARS-Mandan) on an experiment to compare various lifting, storage and conditioning treatments. Time of lifting (spring vs. fall) type of storage ("heel-in" bed vs. cooler), and sweating process (peat vs. shingletoe at 2 different temperatures) will be examined.

Current Status: In 1986 there was very little difference among the various treatments, they all appeared to break dormancy well. Data is not complete at this time. The experiment will be repeated in 1987 with some modifications in treatments.

GRASS SEED PRODUCTION

It is a primary objective and responsibility of the Plant Materials Center to grow and maintain a supply of foundation or foundation quality grass seed for officially and informally released varieties. This seed is made available to commercial seed producers for establishment of certified seed increase fields. In several cases, breeder seed must also be produced in carefully maintained and isolated breeder blocks. Additional seed increase fields of selected materials are established and maintained in order to provide a seed supply for comparative variety trails, demonstration plantings, other PMC's, research agencies and SCS District Cooperators who establish field plantings.

Plant Materials Distributed in North Dakota for Field Plantings in 1986.

A total of 465 PLS pounds of grass and forb seed, 2231 seedlings were used to make 18 new field plantings. 356 PLS pounds of grass seed and 5 pounds of tree seed were provided to nurserymen and seed growers for commercial seed increase.

<u>Area</u>	<u>Grass Seed (PLS pounds)</u>	<u>Seedlings</u>	<u>Tree Seed (pounds)</u>
1	1	5	--
2	376	260	--
3	16	840	2
4	--	931	3
5	<u>72</u>	<u>195</u>	<u>--</u>
Total	465	2231	5

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Inactive - 584

(first number - active plantings)
(second number - inactive plantings)

Field plantings established in North Dakota in 1986.

711	502		995		503		502		512	
Admin	506	710	Field	Field	Cooperator	Planting	1/	011	001	012
Area	MLRA	County	Office	Office		No	Cultivar	PI No.	Purpose	
01	55A	Ramsey	Devils Lake	ND SHD	ND	ND86009	ND-3959	35964T	maximilian sunflower	
01	55A	Ramsey	Devils Lake	Lake Region		ND86018	ND-3959	35964T	maximilian sunflower	
02	55B	Barnes	Valley City	Community College		ND86004	SD-131	6073T	mayday	
02	56	Cass	W. Fargo	T. Odegard		ND86006	SD-149	478001	switchgrass	
02	55B	Dickey	Oakes	Lincoln-Oakes		ND86013	Cardan	469226	green ash	
02	056	Richland	Wahpeton	F. Schumacher		ND86001	Pierre	476980	sideoats grama	
02	056	Richland	Wahpeton	F. Schumacher		ND86001	NDG-4	477994	big bluestem	
02	056	Richland	Wahpeton	F. Schumacher		ND86001	MDN-759	116252	pubescent wheatgrass	
03	53B	Burke	Bowbells	R. Corey		ND86011	Oahe	476982	hackberry	
03	53A	Divide	Crosby	B. Olson		ND86003	Cardan	469226	green ash	
03	55	Rolette	Rolette	A. Snell		ND86005	SD-131	6073T	mayday	
03	55A	Ward	Minot	D. Clark		ND86010	Cardan	469226	green ash	
04	054	Emmons	Linton	N. Beitelspacher		ND86012	Oahe	476982	hackberry	
04	054	Emmons	Linton	N. Beitelspacher		ND86016	Oahe	476982	(spring lifted)	
05	054	Dunn	Killdeer	A. Skachenko		ND86014	Oahe	476982	hackberry	
05	054	Dunn	Killdeer	A. Skachenko		ND86015	Oahe	476982	(fall lifted)	
05	054	Dunn	Killdeer	G. Kulish		ND86017	Oahe	476982	hackberry	
05	054	Dunn	Killdeer	J. Werre		ND86002	SD-131	6073T	(spring lifted)	
05	054	Dunn	Killdeer						hackberry	
05	054	Dunn	Killdeer						mayday	

1/ First two numbers of the field planting number indicate the year of establishment.

- 2/ Purpose
- SDIN - Seed increase
 - WLDF - Wildlife
 - PAST - Pasture
 - WIND - Windbreak
 - RNGE - Range
 - SPEC - Special

Active Field plantings in North Dakota as of December 31, 1986.

711 Admin Area	506 MLRA	710 County	995 Field Office	503 Cooperator	502		011 Cultivar	001 PI No.	012 Name	512 Purpose
					Field 1/ Planting No	2/ Purpose				
01	55A	Cavalier	Langdon	Brown, D.	ND83003	SDIN	Cardan	469226	green ash	SDIN
01	55A	Cavalier	Langdon	Dawley, V.	ND83004	SDIN	Cardan	469226	green ash	SDIN
01	56	Grand Forks	Grand Forks	Myron, R.	ND85005	SPEC	ND-1879	11850T	honeylocust	SPEC
01	56	Grand Forks	Grand Forks	City of G.F.	ND85031	WIND	ND-1879	11850T	honeylocust	WIND
01	56	Pembina	Cavalier	Green, M.	ND84008	WIND	Cardan	469226	green ash	WIND
02	55B	Dickey	Oakes	Lincoln-Oakes	ND85004	SDIN	NDG-4	477994	big bluestem	SDIN
02	55B	Griggs	Cooperstown	Wold, J.	ND83007	SDIN	Cardan	469226	green ash	SDIN
02	56	Richland	Wahpeton	Schumacher, F.	ND85006	SDIN	'Shoshone'	434040	beardless wildrye	SDIN
02	56	Richland	Wahpeton	Fleischaur, K.	ND85009	WLDF	ND-444	479006	indiangrass	WLDF
02	55B	Sargent	Forman	Hogness, T.	ND85013	WIND	ND-1879	11850T	honeylocust	WIND
02	55B	Sargent	Forman	Carpenter, K.	ND85028	WIND	ND-1829	11850T	honeylocust	WIND
02	55B	Sargent	Forman	Brash, L.	ND85029	WIND	ND-1879	11850T	honeylocust	WIND
03	55A	Bottineau	Bottineau	USDI-FWS	ND85001	SDIN	ND-444	4790061	indiangrass	SDIN
03		Burke	Bowbells	Fisher, G.	ND84010	SDIN	Cardan	469226	green ash	SDIN
03	53B	Burke	Bowbells	Dihlse, D.	ND84011	SDIN	Cardan	469226	green ash	SDIN
03	53B	Burke	Bowbells	Larsen, M.	ND84012	SDIN	Cardan	469226	green ash	SDIN
03	53A	Divide	Crosby	Brooke, J.	ND85026	WIND	Oahe	476982	hackberry	WIND
03	55A	Rolette	Rolette	Hagen, C.	ND85024	WIND	ND-629	477992	amur maple	WIND
03	55A	Rolette	Rolette	Rosecrans, A.	ND85027	WIND	Oahe	476982	hackberry	WIND
04		Burleigh	Bismarck	Lincoln-Oakes	ND84014	SDIN	Cardan	469226	green ash	SDIN
				Nursery						
04	53B	Burleigh	Bismarck	NDG&F	ND85023	WLDF	ND-1879	11850T	honeylocust	WLDF
04	53B	Logan	Napoleon	Silbernagel, J.	ND85002	WIND	ND-629	477992	amur maple	WIND
04		McLean	Garrison	NDG&F Dept. (Custer Mine)	ND85034	WLDF	ND-3959	35964T	maximilian sunflower	WLDF
04	54	Oliver	Center	Heinke, H.	ND85015	WIND	ND-629	477992	amur maple	WIND
04	54	Oliver	Center	Gullickson, L.	ND85017	WIND	Oahe	476982	hackberry	WIND
04	55B	Stutsman	Jamestown	Scott, K.	ND85021	WIND	ND-1879	11850T	honeylocust	WIND
04	55B	Stutsman	Jamestown	Hochhalter, N.	ND85022	WIND	ND-1879	11850T	honeylocust	WIND
05	54	Bowman	Bowman	Fischer, F.	ND85007	WIND	ND-1879	11850T	honeylocust	WIND
05	54	G. Valley	Beach	Noll, J.	ND85016	WIND	ND-1879	11850T	honeylocust	WIND
05	54	Hettinger	New England	Nielson, S.	ND85011	WIND	ND-1879	11850T	honeylocust	WIND
05	54	Hettinger	New England	Gussey, G.	ND85019	WIND	ND-629	477992	amur maple	WIND
05	54	Hettinger	New England	Gullickson, P.	ND85020	WIND	ND-1879	11850T	honeylocust	WIND
05	54	Stark	Dickinson	Goetz, G.	ND85030	RNGE	ND-95	477995	prairie sandreed	RNGE
05	53A	Williams	Williston	Jorgenson, E.	ND85014	WIND	Oahe	476982	hackberry	WIND

1/ First two numbers of the field planting number indicate the year of establishment.

2/ Purpose - SDIN - Seed increase PAST - Pasture RNGE - Range
 WLDF - Wildlife WIND - Windbreak SPEC - Special

Field plantings placed in inactive status in North Dakota as of December 31, 1986.

711	502		995		503		501		512	
Admin	506	710	Field	Field 1/	011	001	012	512	Purpose 2/	
Area	MLRA	County	Office	Planting No	Cultivar	PI No.	Name			
01	55A	Benson	Leeds	ND82001	Cardan	469226	green ash	SDIN		
01	55A	Ramsey	Devils Lake	ND84001	NDG-4	477994	big bluestem	SDIN		
01	55A	Ramsey	Devils Lake	ND84003	ND-3743	19600T	switchgrass	SDIN		
02	55B	Barnes	Valley City	ND82003	Cardan	469226	green ash	SDIN		
02	55B	Barnes	Valley City	ND82004	ND-14	478004	harbin pear	SDIN		
02	56	Cass	West Fargo	ND84002	SD-93	478007	green needlegrass	SDIN		
02	56	Richland	Wahpeton	ND82006	ND-3207	11849T	green ash	SDIN		
02	56	Richland	Wahpeton	ND82006	ND-14	478004	harbin pear	SDIN		
02	56	Richland	Wahpeton	ND82006	ND-686	478008	J. tree lilac	SDIN		
02	55B	Sargent	Forman	ND84004	SD-149	478001	switchgrass	PAST		
04	53B	Logan	Napoleon	ND82008	ND-14	478004	harbin pear	SDIN		
04	53B	Logan	Napoleon	ND82009	ND-14	478004	harbin pear	SDIN		
04	55B	Stutsman	Jamestown	ND84007	ND-444	478006	indiangrass	SDIN		
05	54	Bowman	Bowman	ND82010	Cardan	469226	green ash	SDIN		
05	54	Hettinger	Mott	ND82013	Cardan	479226	green ash	WIND		
05	54	Hettinger	Mott	ND82013	ND-3207	11849T	green ash	WIND		
05	54	Hettinger	Mott	ND82014	Cardan	469226	green ash	WIND		
05	54	Hettinger	Mott	ND82014	ND-3207	11849T	green ash	WIND		
05	54	Hettinger	Mott	ND82015	ND-3207	11849T	green ash	WIND		
05	54	Hettinger	Mott	ND82015	Cardan	469226	green ash	WIND		
05	54	Hettinger	New England	ND82016	ND-3207	11849T	green ash	WIND		
05	54	Stark	Dickinson	ND84005	ND-95	477995	prairie sandreed	RNGE		
05	54	Stark	Dickinson	ND84006	MDN-759	116232	pubescent wheatgrass	SDIN		
05	53A	Williams	Williston	ND82017	Cardan	469226	green ash	SDIN		

1/ First two numbers of the field planting number indicate the year of establishment.

2/ Purpose

- SDIN - Seed increase
- WLDF - Wildlife
- PAST - Pasture
- WIND - Windbreak
- RNGE - Range
- SPEC - Special

Field plantings terminated in North Dakota as of December 31, 1986.

711 Admin Area	506 MLRA	710 County	995 Field Office	503 Cooperator	502		001 PI No.	012 Name	512 Purpose 2/
					Field 1/ Planting No	011 Cultivar			
01	55A	Cavalier	Langdon	Lorenz, G.	ND83005	Cardan	469226	green ash	SDIN
01	55B	Foster	Carrington	March, W	ND85003	'Oahe'	476982	hackberry	SDIN
02	56	Richland	Wahpeton	Fleischaur, K.	ND85008	Oahe	476982	hackberry	WLDF
02	56	Richland	Wahpeton	Fleischaur, K.	ND85008	ND-1879	11850T	honeylocust	WLDF
02	56	Richland	Wahpeton	Fleischaur, K.	ND85008	ND-629	477992	amur maple	WLDF
02	56	Richland	Wahpeton	Schumacher, F.	ND85032	Killdeer	476981	sideoats grama	SDIN
03	55A	Rolette	Rolette	Hagen, C.	ND85025	Oahe	476982	hackberry	WIND
05	54	Dunn	Killdeer	Killdeer Pk Bd	ND85010	Oahe	476982	hackberry	WIND
05	54	Grant	Carson	Ehrmantraut, A.	ND85012	ND-1879	11850T	honeylocust	WIND
05	54	G. Valley	Beach	Zook, R.	ND85018	ND-1879	11850T	honeylocust	WIND

1/ First two numbers of the field planting number indicate the year of establishment.

2/ Purpose

SDIN - Seed increase
 WLDF - Wildlife
 PAST - Pasture
 WIND - Windbreak
 RNGE - Range
 SPEC - Special

A SUMMARY OF HERBACEOUS FIELD PLANTINGS IN NORTH DAKOTA
10/27/1987

ST	MLRA	SOIL	SERIFS	504	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000
ST	MLRA	SOIL	SERIFS	504	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000
ST	MLRA	SOIL	SERIFS	504	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000
ST	MLRA	SOIL	SERIFS	504	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548																																																																																																																																																																																																																																																																																																																																																																																																																																																																				

RATING SYSTEM 1=EXCELLENT 3=GOOD 5=FAIR 7=POOR 9=VERY POOR

Legend:

505 CNT NUM	(FIPS County Code)	833 VIG	(Plant vigor)
502 FIELD PLNT NO	(Field planting number: state, year planted, sequence)	821 WDC	(Weed competition)
517 PURP	(Purpose)	910 ADPT	(Adaptation to site)
801 YR RC	(Year of record)	713 STAT	(Status: active, inactive, terminated)
531 AMT ACRE	(Number of acres)		
523 SD RATE	(Seeding rate)		
830 STD VIS	(Visual rating of stand or plants per square yard)		

A SUMMARY OF HERBACEOUS FIELD PLANTINGS IN NORTH DAKOTA
10/27/1987

* 504	506	507	503	711	505	503	001	002	502	517	801	531	523	830	833	821	910	713	
ST	HLRA	SOIL SERIES	SOIL	ADM	NUM	COOPERATOR	ACCN	PLANT	FIELD	NO	YR	AMT	SD	STD	VIS	WDC	AUPT	STAT	
			TEXT	AREA			NUMBER	SYMBOL	PLNT		RC	ACRE	RATE						
*	ND	055A	HAMERLY-SVEA	LSIC	1	71	USDI-F&WS	477994	ANGE	ND84001	WLDF	*86		25	1	1	3	4	
*	ND	055A			1	71	USDI-FWS	9019500	PAVI2	ND84003	SD1N	*85		15	1	1	1	1	
*	ND	055A			1	71	USDI-FWS	9019500	PAVI2	ND84003	SD1N	*86		38	1	2	1	1	
*	ND				1	71	ND STATE HWY DEPT	9035964	HEMA2	ND86009	CARD	*86	.1			5	3	4	
*	ND				1	71	LAKE REG COM COLLE3	9035964	HEMA2	ND86018		*86	.1			1	3	4	
*	ND	055B	BARNES-SVEA	L	2	3	USDI-FWS STONY SLOUG	476980	BOCU	ND83010	SD1N	*85		270	3	5	1	1	
*	ND	056			2	17	I-29 INTERSTATE	477994	ANGE	ND69004		*85		20	1	1	1	1	
*	ND				2	17	ND HIGHWAY DEPT, I-29	478002	PAVI2	ND69004		*81		5	3	9	3	1	
*	ND	056	BARNES-SVEA	L	2	17	USDI-FWS, VALLEY CITY	478001	PAVI2	ND81003	WLDF	*85		25	1	1	1	1	
*	ND	056	WYARD-HAMERLY	SIL	2	17	USDI-FWS, VALLEY CITY	478002	PAVI2	ND81003		*82	10.0	3		3	3	1	
*	ND	056	WYARD-HAMERLY	SIL	2	17	USDI-FWS, VALLEY CITY	478002	PAVI2	ND81003		*84	10.0	1		1	3	1	
*	ND	055B	WYARD-HAMERLY	LSIL	2	17	USDI-FWS, VALLEY CITY	477994	ANGE	ND81011	WLDF	*85		20	1	1	1	1	
*	ND	056	WYARD-HAMERLY	SIL	2	17	USDI-FWS, VALLEY CITY	478002	PAVI2	ND81012	WLDF	*85		25	1	1	1	1	
*	ND	055B	WYARD-HAMMERLY	L	2	17	USDI-FWS	478007	STVI4	ND84002	WLDF	*85		3	3	5	1	1	
*	ND	055B	WYARD-HAMMERLY	L	2	17	USDI-FWS	478007	STVI4	ND84002	WLDF	*86		15	3	3	3	1	
*	ND	055B			2	21	LINCOLN-OAKES NURS	477994	ANGE	ND85004	SD1N	*85	1.0	.8		7	3	4	
*	ND	055B			2	21	LINCOLN-OAKES NURS	477994	ANGE	ND85004	SD1N	*86	1.0	.8	1	1	1	4	
*	ND	055B	GARDENA	SIL	2	73	FT RANSOM STATE PARK	477994	ANGE	VD81001	WLDF	*85		7	1	3	1	1	
*	ND	055B	GARDENA	SIL	2	73	FT. RANSOM ST. PARK	478002	PAVI2	VD81001	WLDF	*82	10.0	9	9	9	3	1	
*	ND	055B	GARDENA	SIL	2	73	FT. RANSOM ST. PARK	478002	PAVI2	VD81001	WLDF	*84	10.0	9	7	1	3	1	
*	ND	055B	GARDENA	SIL	2	73	FT. RANSOM ST. PARK	478002	PAVI2	ND81001	WLDF	*85	10.0	1	7	3	7	1	
*	ND	055B	GARDENA	SIL	2	73	FT RANSOM STATE PARK	478002	PAVI2	VD81001	WLDF	*85		1	7	3	7	1	
*	ND	055B	GARDENA	SIL	2	73	FT RANSOM ST PK	477994	ANGE	ND81003	WLDF	*81	2.0	3				1	
*	ND	055B	GARDENA	SIL	2	73	FT RANSOM ST PK	477994	ANGE	ND81003	WLDF	*82	2.0	7	9	3		1	
*	ND	055B	GARDENA	SIL	2	73	FT RANSOM ST PK	477994	ANGE	ND81003	WLDF	*83	2.0	9	5	3	3	1	
*	ND	055B	GARDENA	SIL	2	73	FT RANSOM ST PK	477994	ANGE	ND81003	WLDF	*84	2.0	9	5	1	3	1	
*	ND	055B	FORDVILLE	L	2	73	FT RANSOM STATE PARK	477994	ANGE	ND81999	WLDF	*85		3	3	3	3	1	
*	ND	055B	FORDVILLE	L	2	73	FT. RANSOM ST. PARK	478002	PAVI2	ND81999	WLDF	*82	10.0	9	9	1	1	3	1
*	ND	055B	FORDVILLE	L	2	73	FT. RANSOM ST. PARK	478002	PAVI2	ND81999	WLDF	*84	10.0	9	9	3	3	3	1
*	ND	055B	FORDVILLE	L	2	73	FT RANSOM STATE PARK	478002	PAVI2	ND81999	WLDF	*85			9	3	9	1	
*	ND	055B	FORDVILLE	L	2	73	FT. RANSOM ST. PARK	478002	PAVI2	ND81999	WLDF	*85	10.0		9	3	3	9	1
*	ND	056	FARGO	SIC	2	77	L ROGNE	478002	PAVI2	ND82005	WLDF	*82	7.0	5	7	3	3	1	
*	ND	056	FARGO	SIC	2	77	L ROGNE	478002	PAVI2	ND82005	WLDF	*84	7.0	3	3	1	3	1	
*	ND	056	FARGO	SIC	2	77	L ROGNE	478002	PAVI2	ND82005	WLDF	*85	7.0	4	3	3	1	1	
*	ND	056	FARGO	SIC	2	77	L ROGNE	478002	PAVI2	ND82005	WLDF	*85		4	3	3	1	1	
*	ND	056	FARGO	SIC	2	77	L ROGNE	477993	AGSM	ND83011	SD1N	*85		6	1	1	1	1	

RATING SYSTEM 1=EXCELLENT 3=GOOD 5=FAIR 7=POOR 9=VERY POOR

A SUMMARY OF HERBACEOUS FIELD PLANTINGS IN NORTH DAKOTA
10/27/1987

ST	504	506	507	MLRA	SOIL SERIES	509	711	505	503	001	002	PLANT	502	517	801	531	523	830	833	821	910	713
						SOIL	ADM	CNT		ACCN	SYMBOL	FIELD	PLNT	NO	PJRP	RC	AMT	SD	VIG	WDC	ADPT	STAT
						TEXT	AREA	VUM	COOPERATOR	NUMBER							RATE	VIS				
*	ND	056	FARGO			SIC	2	77	L ROGNE	477993	AGSM	V083011	SDIN	*86				72	1	1	1	1
*	ND	056	FARGO			SIC	2	77	F SCHUMACHER	434040	ELTR3	N085006	SDIN	*86			.5	2		9	3	4
*	ND						3	9	F ZURCHER	478002	PAVI2	N072019		*84			5.0	4	3	1	3	1
*	ND					LFS	3	9	F ZURCHER	478002	PAVI2	N072019		*85				42	5	5	3	1
*	ND						3	9	F ZURCHER	478002	PAVI2	N072019		*85			5.0	42	5	5	3	1
*	ND	055A	BARNES			L	3	9	J. CLARK SALTER VNR	477994	ANGE	N080015	WLDF	*80			5.0	1		1		1
*	ND	055A	BARNES			L	3	9	J. CLARK SALTER VNR	477994	ANGE	N080015	WLDF	*83			5.0	1	3	1	3	1
*	ND	055A	HECLA			LFS	3	9	J. CLARK SALTER VNR	477994	ANGE	N082007	SDIN	*82			8.0	3	3	1		1
*	ND	055A	HECLA			LFS	3	9	J. CLARK SALTER VNR	477994	ANGE	N082007	SDIN	*83			8.0	1	3	1		1
*	ND	055	BARNES-AASTAD			L	3	49	A GOTVASLEE	172390	BR012	N083014	PAST	*85				6	5	5		1
*	ND					FS	3	69	USDI-FWS WPA	478002	PAVI2	N081005	WLDF	*82			5.0	1	5	1	3	1
*	ND					FS	3	69	USDI-FWS WPA	478002	PAVI2	N081005	WLDF	*84			5.0	2	3	1		1
*	ND					FS	3	69	USDI-F&WS,WPA	478002	PAVI2	N081005	WLDF	*85			120	1	1	1	1	1
*	ND					FS	3	69	USDI-FWS WPA	478002	PAVI2	N081005	WLDF	*85			5.0	120	1	1	1	1
*	ND	055	LAPRAIRIE			L	4	93	WILDLIFE RES. CENTER	315658	ANGE	N071010	WLDF	*84			2.0	1	3	1	3	1
*	ND	055	LAPRAIRIE			L	4	93	WILDLIFE RES. CENTER	315658	ANGE	N071010	WLDF	*85			2.0	19	3	5	1	1
*	ND	055	LAPRAIRIE			L	4	93	WILDLIFE RESEARCH CT	315658	ANGE	N071010	BEAU	*85				19	3	5	1	1
*	ND	055					4	93	ARROWWOOD REFUGE	478002	PAVI2	N072024	WLDF	*75			10.0	3	3	5		1
*	ND	055B	LAPRAIRIE			L	4	93	USDI-FWS, NPJRC	477994	ANGE	N078002	WLDF	*83			8.0	2	1	1	3	1
*	ND	055B	LAPRAIRIE			L	4	93	USDI-FWS, NPJRC	477994	ANGE	N078002	WLDF	*84			8.0	1	1	1	3	1
*	ND	055B	LAPRAIRIE			L	4	93	USDI-F&WS,NPJRC	477994	ANGE	N078002	BEAN	*85				10	1	0	1	1
*	ND	055B	LAPRAIRIE			L	4	93	USDI-FWS, NPJRC	477994	ANGE	N078002	WLDF	*85			8.0	10	1	0	1	1
*	ND	055B	LAPRAIRIE			L	4	93	USDI-FWS, NPJRC	478002	PAVI2	N078002	BEAN	*84			8.0	1	1	1	3	1
*	ND	055B	LAPRAIRIE			L	4	93	USDI-F&WS,NPJRC	478002	PAVI2	N078002	BEAN	*85				10	1	0	1	1
*	ND	055B	LAPRAIRIE			L	4	93	USDI-FWS, NPJRC	478002	PAVI2	N078002		*85			8.0	10	1	0	1	1
*	ND	055B	BARNES-SVEA			L	4	93	USDI-FWS, NPJRC	478002	PAVI2	N081009		*83			1.0	9	3	1	3	1
*	ND	055B	BARNES-SVEA			L	4	93	USDI-FWS, NPJRC	477994	ANGE	N081009		*84			1.0	1	1	1	3	1
*	ND	055B	BARNES-SVEA			L	4	93	USDI-FWS,NPJRC,WOODW	477994	ANGE	N081009	WLDF	*85				1	3	3	1	1
*	ND	055B	BARNES-SVEA			L	4	93	USDI-FWS, NPJRC	477994	ANGE	N081009		*85			1.0	1	3	3	1	1
*	ND	093	BARNES-SVEA			L	4	93	USDI-FWS, NPJRC	478002	PAVI2	N081009	WLDF	*84			1.0	1	1	1	3	1
*	ND	055B	BARNES-SVEA			L	4	93	USDI-FWS,NPJRC,WOODW	478002	PAVI2	N081009	WLDF	*85				10	3	3	1	1
*	ND	093	BARNES-SVEA			L	4	93	USDI-FWS, NPJRC	478002	PAVI2	N081009	WLDF	*85			1.0	10	3	3	1	1
*	ND	055B					4	93	USDI-FWS, NPJRC	478006	SONU2	N081009		*83			10.0	9	5	1		1
*	ND	055B					4	93	USDI-FWS, NPJRC	478006	SONU2	N081009		*84			10.0	1	1	1	3	1
*	ND	055B					4	93	USDI-FWS, NPJRC	478006	SONU2	N081009		*85			10.0	10	3	3	1	1
*	ND	055B	BARNES-SVEA			L	4	93	USDI-FWS,NPJRC,WOODW	478006	SONU2	N081009	WLDF	*85				10	3	3	1	1

RATING SYSTEM 1=EXCELLENT 3=GOOD 5=FAIR 7=POOR 9=VERY POOR

A SUMMARY OF HERBACEOUS FIELD PLANTINGS IN NORTH DAKOTA
10/27/1987

504	506	507	509	711	505	503	001	002	002	502	517	801	531	523	830	833	821	910	713
ST	MLRA	SOIL SERIES	SOIL ADJ	AREA	NUM	COOPERATOR	ACCN	PLANT	SYMBOL	PLNT NO	PJRP	YR	AMT	SD	VIS	VIG	WDC	ADPT	STAT
ND	055B	BARNES-3USE	L	4	33	USDI-FWS, NPWRC WOODW	478007	STVI4		VD81013	WLDF	*85			20	3	3	1	1
ND	055B	FORDVILLE-RENSHA	L	4	93	M HCECKLE	478001	PAVI2		VD83015	PAST	*85			40	1	3	3	I
ND	055B	LAPRAIRIE	L	4	93	USDI-FWS, NPWRC	478006	SONU2		VD84007		*84			3	5	9	3	A
ND	055B	LAPRAIRIE	L	4	93	USDI-FWS, NPWRC	478006	SONU2		VD84007		*85			2	3	9	1	A
ND	055B	LAPRAIRIE	L	4	93	USDI-FWS NORTHERN PR	478006	SONU2		VD84007	WLDF	*85			2	3	9	1	A
ND	055B	LAPRAIRIE	L	4	93	USDI-FWS, NPWRC	478006	SONU2		VD84007		*86				3	9	1	A
ND	055B	LAPRAIRIE	L	4	93	USDI-FWS NORTHERN PR	478006	SONU2		VD84007	WLDF	*86				3	9	1	A
ND	054	BELFIELD-RHODS	SICL	5	89	A BIEL	116252	AGINT		ND83016	SDIN	*85			38	3	3	3	I
ND	054	VEBAR-PARSHALL	FSL	5	89	G GOETZ	477995	CALO		ND84005	RNGE	*85							A
ND	054	MORTON-FARLAND	SIL	5	89	M BOBB	116252	AGINT		ND84006	SDIN	*85			34	1	1	1	A
ND	054	VEBAR - PARSHALL	FSL	5	89	G GOETZ	477995	CALO		VD85030	RNGE	*85	2.1	1.7			7		A

RATING SYSTEM 1=EXCELLENT 3=GOOD 5=FAIR 7=POOR 9=VERY POOR

A SUMMARY OF BOYD-VIL-A• BIG BLUESTEM FIELD PLANTINGS IN NORTH DAKOTA
11/09/1987

* 504	506	507	509	711	505	503	001	002	502	517	901	531	523	830	833	921	910	713
ST	MLRA	SOIL SERIES	SOIL	ADM	CNT		ACCN	PLANT	FIELD		YR	AMT	SD	STD				
			TEXT	AREA	NUM	COOPERATOR	NUMBER	SYMBOL	PLNT	NO	PJRP	RC	RATE	VIS	VIG	WDC	ADPT	STAT
	VD	055	LAPRAIRIE	L	4	93	WILDLIFE	RESEARCH	CT	315658	ANGE	VD71010	BEAU					I
	VD	055	LAPRAIRIE	L	4	93	WILDLIFE	RES.	CENTER	315658	ANGE	VD71010	WLCF	1	3	1	3	I
	VD	055	LAPRAIRIE	L	4	93	WILDLIFE	RESEARCH	CT	315658	ANGE	VD71010	BEAU	19	3	5	1	I
	VD	055	LAPRAIRIE	L	4	93	WILDLIFE	RES.	CENTER	315658	ANGE	VD71010	WLCF	19	3	5	1	I

RATING SYSTEM 1=EXCELLENT 3=GOOD 5=FAIR 7=POOR 9=VERY POOR

Legend:

- 505 CNT NUM (FIPS County Code)
- 502 FIELD PLNT NO (Field planting number: state, year planted, sequence)
- 517 PURP (Purpose)
- 801 YR RC (Year of record)
- 531 AMT ACRE (Number of acres)
- 523 SD RATE (Seeding rate)
- 830 STD VIS (Visual rating of stand or plants per square yard)
- 833 VIG (Plant vigor)
- 821 WDC (Weed competition)
- 910 ADPT (Adaptation to site)
- 713 STAT (Status: active, inactive, terminated)

A SUMMARY OF V00-4 BIG BLUESTEM FIELD PLANTINGS IN NORTH DAKOTA
11/12/1987

* 504	506	507	509	711	505	503	001	002	502	517	801	531	523	830	833	821	910	713
ST	MLRA	SOIL SERIES	SOIL ADM	CNT	NUM	COOPERATOR	ACCN	PLANT	FIELD	PJRP	YR	AMT	SD	VIS	WDC	ADPT	STAT	
			TEXT	AREA			NUMBER	SYMBOL	PLNT	NO	RC	ACRE	RATE					

*	NO				17	NO HIGHWAY DEPT, I-29	477994	ANGE	ND69004	CARD	*81			3	1	3	3	1
*	NO				17	NO HIGHWAY DEPT, I-29	477994	ANGE	ND69004	CARD	*85			20	1	1	1	1
*	ND	WYARD-HAMERLY	L		17	USDI-FWS, VALLEY CITY	477994	ANGE	ND81003		*81	10.0	10.0	7	9	9	3	1
*	ND	WYARD-HAMERLY	L		17	USDI-FWS, VALLEY CITY	477994	ANGE	ND81003		*82	10.0	10.0	3	5	9	3	1
*	ND	WYARD-HAMERLY	L		17	USDI-FWS, VALLEY CITY	477994	ANGE	ND81003		*83	10.0	10.0	3	1	3	3	1
*	ND	WYARD-HAMERLY	L		17	USDI-FWS, VALLEY CITY	477994	ANGE	ND81003		*84	10.0	10.0	1	1	1	3	1
*	ND	FORDVILLE	L		73	FT RANSOM ST PK	477994	ANGE	ND81999	WLDF	*81		10.0	7	1	1	1	1
*	ND	FORDVILLE	L		73	FT RANSOM ST PK	477994	ANGE	ND81999	WLDF	*82		10.0	9	3	1	1	1
*	ND	FORDVILLE	L		73	FT RANSOM ST PK	477994	ANGE	ND81999	WLDF	*83		10.0	9	7	3	1	1
*	ND	FORDVILLE	L		73	FT RANSOM ST PK	477994	ANGE	ND81999	WLDF	*84		10.0	9	3	3	3	1
*	ND	FORDVILLE	L		73	FT RANSOM ST PK	477994	ANGE	ND81999	WLDF	*85		10.0	3	3	3	3	1
*	ND	VAALERS HAMERLY	L	1	71	R BLEGEN	477994	ANGE	ND83001	SCIN							1	1
*	ND	VAALERS HAMERLY	L	1	71	R BLEGEN	477994	ANGE	ND83001	WLDF	*83	10.0	9.0	2	3	5	3	1
*	ND	VAALERS HAMERLY	L	1	71	R BLEGEN	477994	ANGE	ND83001	WLDF	*84	10.0	9.0	2	3	1	3	1
*	ND	VAALERS HAMERLY	L	1	71	R BLEGEN	477994	ANGE	ND83001	SCIN	*85			35	1	5	3	1
*	ND	VAALERS HAMERLY	L	1	71	R BLEGEN	477994	ANGE	ND83001	WLDF	*85	10.0	9.0	35	1	5	3	1
*	ND	HAMERLY-SVEA	LSIC	1	71	USDI-F&WS	477994	ANGE	ND84001	WLDF							4	1
*	ND	HAMERLY-SVEA	LSIC	1	71	USDI-F&WS	477994	ANGE	ND84001	WLDF	*85			25	1	3	3	4
*	ND	HAMERLY-SVEA	LSIC	1	71	USDI-F&WS	477994	ANGE	ND84001	WLDF	*86			25	1	1	3	4
*	ND			2	17	I-29 INTERSTATE	477994	ANGE	ND69004								1	1
*	ND			2	17	I-29 INTERSTATE	477994	ANGE	ND69004		*85			20	1	1	1	1
*	ND	WYARD-HAMERLY	LSIL	2	17	USDI-FWS, VALLEY CITY	477994	ANGE	ND81011	WLDF							1	1
*	ND	WYARD-HAMERLY	LSIL	2	17	USDI-FWS, VALLEY CITY	477994	ANGE	ND81011	WLDF	*85			20	1	1	1	1
*	ND			2	21	LINCOLN-OAKES NURS	477994	ANGE	ND85004	SDIN	*85	1.0	.8		1	7	3	4
*	ND			2	21	LINCOLN-OAKES NURS	477994	ANGE	ND85004	SDIN	*86	1.0	.8	36	1	1	1	4
*	ND	GARDENA	SIL	2	73	FT RANSOM STATE PARK	477994	ANGE	ND81001	WLDF	*85			7	1	3	1	1
*	ND	GARDENA	SIL	2	73	FT RANSOM STATE PARK	477994	ANGE	ND81001	WLDF	*81		2.0	3				1
*	ND	GARDENA	SIL	2	73	FT RANSOM ST PK	477994	ANGE	ND81003	WLDF	*82		2.0	7	3	3		1
*	ND	GARDENA	SIL	2	73	FT RANSOM ST PK	477994	ANGE	ND81003	WLDF	*83		2.0	9	5	3	3	1
*	ND	GARDENA	SIL	2	73	FT RANSOM ST PK	477994	ANGE	ND81003	WLDF	*84		2.0	9	5	1	3	1
*	ND	GARDENA	SIL	2	73	FT RANSOM ST PK	477994	ANGE	ND81003	WLDF	*84		2.0	9	5	1	3	1
*	ND	FORDVILLE	L	2	73	FT RANSOM STATE PARK	477994	ANGE	ND81999	WLDF	*85			3	3	3	3	1
*	ND	FORDVILLE	L	2	73	FT RANSOM STATE PARK	477994	ANGE	ND81999	WLDF	*80	5.0		1		1	1	1
*	ND	BARVES	L	3	9	J. CLARK SALTER VWR	477994	ANGE	ND80015	WLDF	*83	5.0		1	3	1	3	1
*	ND	BARVES	L	3	9	J. CLARK SALTER VWR	477994	ANGE	ND80015	WLDF	*83	5.0		1	3	1	3	1
*	ND	HECLA	LFS	3	9	J. CLARK SALTER VWR	477994	ANGE	ND82007	SCIN	*82	10.0	8.0	3	3	1	1	1

RATING SYSTEM 1=EXCELLENT 3=GOOD 5=FAIR 7=POOR 9=VERY POOR

Legend:

505 CNT NUM (FIPS County Code)
502 FIELD PLNT NO (Field planting number: state, year planted, sequence)
517 PURP (Purpose)
801 YR RC (Year of record)
531 AMT ACRE (Number of acres)
523 SD RATE (Seeding rate)
830 STD VIS (Visual rating of stand or plants per square yard)

833 VIG (Plant vigor)

821 WDC (Weed competition)

910 ADPT (Adaptation to site)

713 STAT (Status: active, inactive, terminated)

A SUMMARY OF JDG-4 BIG BLUESTEM FIELD PLANTINGS IN NORTH DAKOTA
11/12/1987

ST	MLRA	SOIL SERIES	SOIL ADJ	SOIL	TEXT	AREA	CVT	503	001	002	502	517	801	531	523	830	833	821	910	713
									ACCN	PLANT	FIELD	PJRP	RC	AMT	SD	SID	VIS	JDC	ADPT	STAT
									NJMBER	SYMBOL	PLNT	NO			RATE	VIS				
VD	055A	HECLA	LFS	3	9	J. CLARK	SALYER	VWR	477994	ANGE	VD82007	SOIN	*83	10.0	8.0	1	3	1		1
VD	055B	LAPRAIRIE	L	4	93	USDI,F&WS,NP	JRC		477994	ANGE	VD78002	BEAV								1
ND	055B	LAPRAIRIE	L	4	93	USDI-FWS,NP	JRC		477994	ANGE	VD78002	WLD	*83	8.0	8.0	2	1	1		3
VD	055B	LAPRAIRIE	L	4	93	USDI-FWS,NP	JRC		477994	ANGE	VD78002	WLD	*84	8.0	8.0	1	1	1		3
VD	055B	LAPRAIRIE	L	4	93	USDI-FWS,NP	JRC		477994	ANGE	VD78002	WLD	*85	8.0	8.0	10	1	0		1
ND	055B	LAPRAIRIE	L	4	93	USDI,F&WS,NP	JRC		477994	ANGE	VD78002	BEAN	*85			10	1	0		1
VD	055B	BARVES-SVEA	L	4	93	USDI,FWS,VP	JRC,WJDDW		477994	ANGE	VD81009	WLD								1
VD	055B	BARVES-SVEA	L	4	93	USDI-FWS,NP	JRC		477994	ANGE	VD81009		*83	1.0		9	3	1		3
VD	055B	BARVES-SVEA	L	4	93	USDI-FWS,NP	JRC		477994	ANGE	VD81009		*84	1.0		1	1	1		3
ND	055B	BARVES-SVEA	L	4	93	USDI-FWS,NP	JRC		477994	ANGE	VD81009		*85	1.0		1	3	3		1
VD	055B	BARVES-SVEA	L	4	93	USDI,FWS,VP	JRC,WJDDW		477994	ANGE	VD81009	WLD	*85			1	3	3		1

RATING SYSTEM 1=EXCELLENT 3=GOOD 5=FAIR 7=POOR 9=VERY POOR

A SUMMARY OF INDIAN GRASS (SORGHASTRUM NUTANS (L.) VASH) FIELD PLANTINGS IN NORTH DAKOTA
11/09/1987

* 504	506	507	509	711	505	503	001	002	502	517	801	531	523	830	833	821	910	713	
ST	MLRA	SOIL	SERIES	SOIL	ADM	CNT	ACCN	PLANT	FIELD	PLNT	NO	PJRP	RC	ACRE	RATE	VIS	WDC	ADPT	STAT
		TEXT	AREA	VJM	COOPERATOR		NJMBER	SYM30L											

*	ND	0558	BARVES-SVFA	L	4	93	USDI-FWS, NPWRC, WOODW	478006	SONU2	ND81009	WLDF								1
*	ND	0558			4	93	USDI-FWS, NPWRC	478006	SONU2	ND81009			*83	10.0	10.0	9	5	1	1
*	ND	0558			4	93	USDI-FWS, NPWRC	478006	SONU2	ND81009			*84	10.0	10.0	1	1	1	3
*	ND	0558	BARVES-SVEA	L	4	93	USDI-FWS, NPWRC, WOODW	478006	SONU2	ND81009	WLDF		*85			10	3	3	1
*	ND	0558			4	93	USDI-FWS, NPWRC	478006	SONU2	ND81009			*85	10.0	10.0	10	3	3	1
*	ND	0558	LAPRAIRIE	L	4	93	USDI-FWS, NORTHERV PR	478006	SONU2	ND84007	WLDF								4
*	ND	0558	LAPRAIRIE	L	4	93	USDI-FWS, NPWRC	478006	SONU2	ND84007			*84			3	5	9	3
*	ND	0558	LAPRAIRIE	L	4	93	USDI-FWS, NORTHERV PR	478006	SONU2	ND84007	WLDF		*85			2	3	9	1
*	ND	0558	LAPRAIRIE	L	4	93	USDI-FWS, NPWRC	478006	SONU2	ND84007			*85			2	3	9	1
*	ND	0558	LAPRAIRIE	L	4	93	USDI-FWS, NORTHERV PR	478006	SONU2	ND84007	WLDF		*86			3	3	9	1
*	ND	0558	LAPRAIRIE	L	4	93	USDI-FWS, NPWRC	478006	SONU2	ND84007			*86			3	3	9	1

RATING SYSTEM 1=EXCELLENT 3=GOOD 5=FAIR 7=POOR 9=VERY POOR

Legend:

- 505 CNT NUM (FIPS County Code)
- 502 FIELD PLNT NO (Field planting number: state, year planted, sequence)
- 517 PURP (Purpose)
- 801 YR RC (Year of record)
- 531 AMT ACRE (Number of acres)
- 523 SD RATE (Seeding rate)
- 830 STD VIS (Visual rating of stand or plants per square yard)
- 833 VIG (Plant vigor)
- 821 WDC (Weed competition)
- 910 ADPT (Adaptation to site)
- 713 STAT (Status: active, inactive, terminated)

A SUMMARY OF 1987 PRAIRIE SANDREE FIELD PLANTINGS IN NORTH DAKOTA
11/15/1987

504	506	507	509	711	505	505	001	002	002	502	517	901	531	523	830	833	821	910	713
ST	MLRA	SOIL	SERIES	SOIL	ADM	CNT	ACCN	PLANT	SYMBOL	PLNT	NO	PJRP	RC	YR	AMT	SD	STD	ADPT	STAT
...	...	...	...	TEXT	AREA	NUM	COOPERATOR	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	VEBAR-PARSHALL	FSL	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	VEBAR-PARSHALL	FSL	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	VEBAR - PARSHALL	FSL	...	...	...	...	...	...	...	...	...	...	...	...	...	...

RATING SYSTEM 1=EXCELLENT 3=GOOD 5=FAIR 7=POOR 9=VERY POOR

Legend:

- 505 CNT NUM (FIPS County Code)
- 502 FIELD PLNT NO (Field planting number: state, year planted, sequence)
- 517 PURP (Purpose)
- 801 YR RC (Year of record)
- 531 AMT ACRE (Number of acres)
- 523 SD RATE (Seeding rate)
- 830 STD VIS (Visual rating of stand or plants per square yard)
- 833 VIG (Plant vigor)
- 821 WDC (Weed competition)
- 910 ADPT (Adaptation to site)
- 713 STAT (Status: active, inactive, terminated)

A SUMMARY OF VDG-955-98 SWITCHGRASS FIELD PLANTINGS IN NORTH DAKOTA
11/09/1987

ST	MLRA	SOIL	SERIES	507	507	711	505	503	COOPERATOR	001	002	502	PLANT	FIELD	017	901	531	523	830	955	821	910	713
ST	MLRA	SOIL	SERIES	TEXT	AREA	NUM	CNT			ACCN	SYMBOL	PLVT	NO	PURP	RC	AMT	SD	RATE	VIS	WDC	ADPT	STAT	
ND	055A	VALLERS-HAMERLY	L			71			LAKE ALICE NJR	478002	PAVI2	ND78001											
ND	055A	VALLERS-HAMERLY	L			71			LAKE ALICE NJR	478002	PAVI2	ND78001											
ND	055A	VALLERS-HAMERLY	L			71			LAKE ALICE NJR	478002	PAVI2	ND78001											
ND	055A	SVEA-HAMERLY	L			5			M ROHRER	478002	PAVI2	ND82002		SDIV									
ND	055A	SVEA-HAMERLY	L			5			M ROHRER	478002	PAVI2	ND82002		SDIV									
ND	055A	SVEA-HAMERLY	L			5			M ROHRER	478002	PAVI2	ND82008		SDIV									
ND	055A	SVEA-HAMERLY	L			5			M ROHRER	478002	PAVI2	ND82008		SDIV									
ND	055A	SVEA-HAMERLY	L			5			M ROHRER	478002	PAVI2	ND82008		SDIV									
ND	055A	SVEA	L			19			T LORENZ	478002	PAVI2	ND83006		SDIV									
ND	055A	SVEA	L			19			T LORENZ	478002	PAVI2	ND83006											
ND	055A	SVEA	L			19			T LORENZ	478002	PAVI2	ND83006											
ND	055A	SVEA	L			19			T LORENZ	478002	PAVI2	ND83006											
ND	055A	VALLERS-HAMERLY	L			1			USDI,FWS,LAKE ALICE	478002	PAVI2	ND78003		WDF									
ND	055A	VALLERS-HAMERLY	L			1			USDI,FWS,LAKE ALICE	478002	PAVI2	ND78003		WDF									
ND	055C	HEGNE	SIC			1			USDI,FWS,LAKE ALICE	478002	PAVI2	ND80001		WDF									
ND	055A					1			LAKE ALICE NJR	478002	PAVI2	ND80001											
ND	055A					1			LAKE ALICE NJR	478002	PAVI2	ND80001											
ND	055C	HEGNE	SIC			1			USDI,FWS,LAKE ALICE	478002	PAVI2	ND80001		WDF									
ND	055A					1			LAKE ALICE NJR	478002	PAVI2	ND81006		SDIV									
ND	055A	HAMERLY-SVEA	L			1			R BLEGEN	478002	PAVI2	ND81006											
ND	055A	HAMERLY-SVEA	L			1			R BLEGEN	478002	PAVI2	ND81006											
ND	055A	HAMERLY-SVEA	L			1			R BLEGEN	478002	PAVI2	ND81006											
ND	055A	HAMERLY-SVEA	L			1			R BLEGEN	478002	PAVI2	ND81006		SDIV									
ND	056	WYARD-HAMERLY	SIL			2			ND HIGHWAY DEPT,I-29	478002	PAVI2	ND69004											
ND	056	WYARD-HAMERLY	SIL			2			USDI-FWS,VALLEY CITY	478002	PAVI2	ND81003											
ND	056	WYARD-HAMERLY	SIL			2			USDI-FWS,VALLEY CITY	478002	PAVI2	ND81003											
ND	056	WYARD-HAMERLY	SIL			2			USDI-FWS,VALLEY CITY	478002	PAVI2	ND81012		WDF									
ND	056	WYARD-HAMERLY	SIL			2			USDI,FWS,VALLEY CITY	478002	PAVI2	ND81012		WDF									
ND	055B	GARDENA	SIL			2			FT RANSOM STATE PARK	478002	PAVI2	ND81001		WDF									
ND	055B	GARDENA	SIL			2			FT. RANSOM ST. PARK	478002	PAVI2	ND81001		WDF									
ND	055B	GARDENA	SIL			2			FT. RANSOM ST. PARK	478002	PAVI2	ND81001		WDF									
ND	055B	GARDENA	SIL			2			FT RANSOM STATE PARK	478002	PAVI2	ND81001		WDF									
ND	055B	GARDENA	SIL			2			FT. RANSOM ST. PARK	478002	PAVI2	ND81001		WDF									
ND	055B	FORJVILLE	L			2			FT RANSOM STATE PARK	478002	PAVI2	ND81999		WDF									
ND	055B	FORJVILLE	L			2			FT. RANSOM ST. PARK	478002	PAVI2	ND81999		WDF									
ND	055B	FORJVILLE	L			2			FT. RANSOM ST. PARK	478002	PAVI2	ND81999		WDF									

RATING SYSTEM 1=EXCELLENT 3=GOOD 5=FAIR 7=POOR 9=VERY POOR

Legend:

- 505 CNT NUM (FIPS County Code)
- 502 FIELD PLNT NO (Field planting number: state, year planted, sequence)
- 517 PURP (Purpose)
- 801 YR RC (Year of record)
- 531 AMT ACRE (Number of acres)
- 523 SD RATE (Seeding rate)
- 830 STD VIS (Visual rating of stand or plants per square yard)
- 833 VIG (Plant vigor)
- 821 WDC (Weed competition)
- 910 ADPT (Adaptation to site)
- 713 STAT (Status: active, inactive, terminated)

A SUMMARY OF V05-960-34 SWITCHGRASS FIELD P-ANTINGS IN NORTH DAKOTA
11/03/1987

ST	MLRA	SOIL	SERIES	504	506	507	509	711	505	503	001	002	502	517	801	531	523	830	833	821	910	713	
				SOIL	ADM	CVT	TEXT	AREA	VUM	COOPERATOR	ACCN	PLANT	FIELD	PLNT	NO	PJRP	RC	ACRE	RATE	VIS	WDC	ADPT	STAT
VD	0553	FORJVILLE		L	2	73	FT RANSON STATE PARK				478002	PAV12	N081999	WLDF	*85					3		9	I
VD	0553	FORJVILLE		L	2	73	FT. RANSON ST. PARK				478002	PAV12	N081999	WLDF	*85		10.0			3		9	I
VD	056	FARGO		SIC	2	77	L ROGNE				478002	PAV12	N082005	SDIV									I
VD	056	FARGO		SIC	2	77	L ROGNE				478002	PAV12	N082005	WLDF	*82	7.0	3.0	5	7	3	3	3	I
VD	056	FARGO		SIC	2	77	L ROGNE				478002	PAV12	N082005	WLDF	*84	7.0	3.0		3	1	3	3	I
VD	056	FARGO		SIC	2	77	L ROGNE				478002	PAV12	N082005	WLDF	*85	7.0	3.0	4	3	3	3	1	I
VD	056	FARGO		SIC	2	77	L ROGNE				478002	PAV12	N082005	SDIV	*85			4	3	3	3	1	I
VD				LFS	3	9	F ZURCHER				478002	PAV12	N072019					4					I
VD					3	3	F ZURCHER				478002	PAV12	N072019		*84	5.0		4	3	1		3	I
VD					3	9	F ZURCHER				478002	PAV12	N072019		*85	5.0		42	5	5		3	I
VD				LFS	3	9	F ZURCHER				478002	PAV12	N072019		*85			42	5	5		3	I
VD		STIRIUM		FS	3	69	USDI,F&WS,WPA				478002	PAV12	N081005	WLDF									I
VD		STIRIUM		FS	3	59	USDI-FWS WPA				478002	PAV12	N081005	WLDF	*82		5.0	1	5	1		3	I
VD		STIRIUM		FS	3	59	USDI-FWS WPA				478002	PAV12	N081005	WLDF	*84		5.0	2	3	1		1	I
VD		STIRIUM		FS	3	59	USDI-FWS WPA				478002	PAV12	N081005	WLDF	*85		5.0	120	1	1	1	1	I
VD		STIRIUM		FS	3	59	USDI-FWS WPA				478002	PAV12	N081005	WLDF	*85			120	1	1	1	1	I
VD	055			FS	3	59	USDI,F&WS,WPA				478002	PAV12	N072024	WLDF	*75		10.0	3	3	5		1	I
VD	055B	LAPRAIRIE		L	4	93	ARRJWOOD REFUGE				478002	PAV12	N078002	BEAV									I
VD	055B	LAPRAIRIE		L	4	93	USDI,F&WS,NPWR				478002	PAV12	N078002		*84	8.0	2.0	1	1	1	1	3	I
VD	055B	LAPRAIRIE		L	4	93	USDI-FWS, NPWR				478002	PAV12	N078002		*85	8.0	2.0	10	1	0	0	1	I
VD	055B	LAPRAIRIE		L	4	93	USDI-F&WS,NPWR				478002	PAV12	N078002	BEAV	*85			10	1	0	0	1	I
VD	055B	BARVES-SVEA		L	4	93	USDI,FWS,NPWR,WOODW				478002	PAV12	N081009	WLDF									I
VD	093	BARVES-SVEA		L	4	93	USDI-FWS, NPWR				478002	PAV12	N081009	WLDF	*84	1.0	10.0	1	1	1	1	3	I
VD	055B	BARVES-SVEA		L	4	93	USDI-FWS, NPWR				478002	PAV12	N081009	WLDF	*85			10	3	3	3	1	I
VD	093	BARVES-SVEA		L	4	93	USDI-FWS, NPWR				478002	PAV12	N081009	WLDF	*85	1.0	10.0	10	3	3	3	1	I

RATING SYSTEM 1=EXCELLENT 3=GOOD 5=FAIR 7=POOR 9=VERY POOR

A SUMMARY OF FORESTBURG SWITCH, RASS FIELD PLANTINGS IN NORTH DAKOTA
11/09/1987

504	506	507	509	711	505	503	001	002	502	517	801	531	523	830	833	821	910	713
ST	ALRA	SOIL	SERILS	SOI-AD4	NUM	COOPERATOR	ACCN	PLANT	FIELD	NO	PJRP	YR	AMT	SJ	VIS	WDC	ADPT	STAT
				TEXT	AREA		NUMBER	SYMBOL	PLNT			RC	RATE					
ND	055C	HAMERLY-SVEA	L	L	1	71 USDI,FWS,LAKE ALICE	478001	PAVI2	ND78001	WLDF								I
ND	055C	HAMERLY-SVEA	L	L	1	71 USDI,FWS,LAKE ALICE	478001	PAVI2	ND78001	WLDF	*85				5	3		I
ND	055C	HEGNE	SIC	I	71	USDI,FWS,LAKE ALICE	478001	PAVI2	ND80001	WLDF								I
ND	055C	HEGNE	SIC	I	71	USDI,FWS,LAKE ALICE	478001	PAVI2	ND80001	WLDF	*85				1	3		I
ND	056	BARNES-SVEA	L	L	2	17 USDI,FWS,VALLEY CITY	478001	PAVI2	ND81003	WLDF								I
ND	056	BARNES-SVEA	L	L	2	17 USDI,FWS,VALLEY CITY	478001	PAVI2	ND81003	WLDF	*85			25	1	1		I
ND	055B	FORDVILLE-RENSHA	L	L	4	93 HJCKLE	478001	PAVI2	ND83015	PAST								I
ND	055B	FORDVILLE-RENSHA	L	L	4	93 HJCKLE	478001	PAVI2	ND83015	PAST	*85			40	1	3		I

RATING SYSTEM 1=EXCELLENT 3=GOOD 5=FAIR 7=POOR 9=VERY POOR

Legend:

- 505 CNT NUM (FIPS County Code)
- 502 FIELD PLNT NO (Field planting number: state, year planted, sequence)
- 517 PURP (Purpose)
- 801 YR RC (Year of record)
- 531 AMT ACRE (Number of acres)
- 523 SD RATE (Seeding rate)
- 830 STD VIS (Visual rating of stand or plants per square yard)
- 833 VIG (Plant vigor)
- 821 WDC (Weed competition)
- 910 ADPT (Adaptation to site)
- 713 STAT (Status: active, inactive, terminated)

A SUMMARY OF WOODY FIELD PLANTINGS IN NORTH DAKOTA
11/04/1987

ST	504	506	507	503	711	505	503	001	002	502	517	699	518	532	552	553	525	527	713
					SOIL	ADMIN	CNT	ACCN	PLNT	FIELD		YR	NUM	SUR	FOL	FD-			
		MLRA	SOIL	SERIES	TEXT	AREA	NUM	CODPERATOR	SYN3	PLNT	ND	PJRP	RC	PLIS	PCT	HT	WID	ADPT	STAT
*	ND	055	BARNES-SVEA	L	L	1	3	E WOVEN	469226	FRPE	ND82001	SDIN	*85	80	.4	2.4	7	1	I
*	ND	055	BARNES-SVEA	L	L	1	5	E WOVEN	469226	FRPE	ND82001	SDIN	*85	90	.4	2.4	7	1	I
*	ND	055	BARNES-SVEA	L	L	1	5	E WOVEN	469226	FRPE	ND82001	SDIN	*85	100	4.8	2.5	5	3	I
*	ND	053				1	15	I. ALM	476382	CEOC	ND67025	WNR	*81		.6	.3	9		
*	ND	053				1	15	R. HINKLE	476382	CEOC	ND74023	WNR	*81	210	.8	.5	3		
*	ND	053	MANJAN	SIL		1	15	R. RISKEDAHL	476382	CEOC	ND74026	WNR	*81	71	1.2	.3			
*	ND	055A	BARNES	L	L	1	19	D BROWN - R KENDALL	469226	FRPE	ND83003	SDIN	*85	100	3.6	1.3	1	3	A
*	ND	055A	BARNES	L	L	1	19	D BROWN - R KENDALL	469226	FRPE	ND83003	SDIN	*85	100	3.6	1.3	1	3	A
*	ND	055A	BARNES	L	L	1	19	D BROWN - R KENDALL	469226	FRPE	ND83003	SDIN	*86	98	5.0	2.0	7	3	A
*	ND	055A	HAMERLY	L	L	1	19	V DAWLEY - SCHRADER	469226	FRPE	ND83004	SDIN	*85	100	3.5	1.2	1	3	A
*	ND	055A	HAMERLY	L	L	1	19	V DAWLEY - SCHRADER	469226	FRPE	ND83004	SDIN	*85	100	3.5	1.2	1	3	A
*	ND	055A	HAMERLY	L	L	1	19	V DAWLEY - SCHRADER	469226	FRPE	ND83004	SDIN	*86	100	5.0	2.7	1	3	A
*	ND	055A	HAMERLY-TONKA	SIL		1	19	S LORENZ - MIKKE-SEV	469226	FRPE	ND83005	SDIN	*85	100	3.4	1.2	1	3	A
*	ND	055A	HAMERLY-TONKA	SIL		1	19	S LORENZ - MIKKE-SEV	469226	FRPE	ND83005	SDIN	*85	100	3.4	1.2	1	3	A
*	ND	055A	HAMERLY-TONKA	SIL		1	19	S LORENZ - MIKKE-SEV	469226	FRPE	ND83005	SDIN	*86						
*	ND	055B	SVEA	L	L	1	31	J MARCH	476382	CEOC	ND85003	SDIN	*85	89	1.3	.7	1		A
*	ND	056	GLYNJON	SIL		1	35	R MYRON	477392	ACGI	ND85005	WIND	*85	80	2.5	1.9	3	3	I
*	ND	056	GLYNJON	SIL		1	35	R MYRON	477392	ACGI	ND85005	WIND	*86	80					36
*	ND	056	ZELL-LADELLE	SIL		1	35	CITY OF GRAND FORKS	9011850	GLSI80	ND85031	WIND	*85	80	2.1	.5	3	3	A
*	ND	056	ZELL-LADELLE	SIL		1	35	CITY OF GRAND FORKS	9011850	GLSI80	ND85031	WIND	*86	80	4.0	1.9	5	3	A
*	ND	055B	BARNES-SVEA	L	L	2	3	G REITEN	469226	FRPE	ND82003	SDIN	*85	99	.6	.3	3	1	I
*	ND	055B	BARNES-SVEA	L	L	2	3	G REITEN	469226	FRPE	ND82003	SDIN	*85	99	.6	.3	3	1	I
*	ND	055B	BARNES-SVEA	L	L	2	3	G REITEN	469226	FRPE	ND82003	SDIN	*86	100	6.0	4.0	1	1	I
*	ND	055B	HAMERLY-SVEA	L	L	2	3	M HEVDORICKS	478004	PYUS80	ND82004	SDIN	*85	40	2.8	.1	7	7	I
*	ND	055B	HAMERLY-SVEA	L	L	2	3	M HEVDORICKS	478004	PYUS80	ND82004	SDIN	*85	40	2.8	.1	7	7	I
*	ND	055B	HAMERLY-SVEA	L	L	2	3	M HEVDORICKS	478004	PYUS80	ND82004	SDIN	*86	40	1.2	1.0	5	3	I
*	ND	055B	SVEA-BARNES	L	L	2	3	T OEGAARD	9006073	PRPA5	ND86004	WIND	*86	60	2.0	1.0	1		A
*	ND	055B	BARNES	L	L	2	39	J WOLD	469226	FRPE	ND83007	SDIN	*85	75	.3	.3	6	3	A
*	ND	055B	BARNES	L	L	2	39	J WOLD	469226	FRPE	ND83007	SDIN	*85	75	.3	.3	6	3	A
*	ND	055B	BARNES	L	L	2	39	J WOLD	469226	FRPE	ND83007	SDIN	*86	75	5.0	2.5	9	3	A
*	ND	056	ANTLER-TONKA	SICL		2	77	FRDETIERT MALTING CO	9011349	FRPE	ND82006	SDIN	*85	99	.8	.5	7	5	I
*	ND	056	ANTLER-TONKA	SICL		2	77	FRDETIERT MALTING CO	9011349	FRPE	ND82006	SDIN	*85	99	.8	.5	7	5	I
*	ND	056	ANTLER-TONKA	SICL		2	77	FRDETIERT MALTING CO	9011349	FRPE	ND82006	SDIN	*86	99	.9	.3	7	1	I
*	ND	056	ANTLER-TONKA	SICL		2	77	FRDETIERT MALTING CO	478004	PYUS80	ND82006	SDIN	*85	72	7.5	3.4	7	5	I
*	ND	056	ANTLER-TONKA	SICL		2	77	FRDETIERT MALTING CO	478004	PYUS80	ND82006	SDIN	*85	72	7.5	3.4	7	5	I
*	ND	056	ANTLER-TONKA	SICL		2	77	FRDETIERT MALTING CO	478004	PYUS80	ND82006	SDIN	*86	75	.8	.4	7	5	I

RATING SYSTEM 1-EXCELLENT 3-GOOD 5-FAIR 7-POOR 9-VERY POOR

Legend:

- 505 CNT NUM (FIPS County Code)
- 502 FIELD PLNT NO (Field planting number: state, year planted, sequence)
- 517 PURP (Purpose)
- 599 YR RC (Year of record)
- 518 NUM PLTS (Number of plants)
- 532 SUR PCT (Percent survival)
- 552 FOL HT (Height at end of season)
- 553 FOL WID (Crown width at end of season)
- 525 WDC (Weed competition)
- 627 ADPT (Adaptation to site)
- 713 STAT (Status: active, inactive, terminated)

A SUMMARY OF 4000Y FIELD PLANTINGS IN NORTH DAKOTA
11/04/1987

* ST	004	506	507	503	711	505	503	001	002	002	502	517	699	518	532	552	553	525	527	713
		PLRA	SOIL SERIES	SOIL TEXT	ADMIN	CNT	COOPERATOR	ACCN NUMBER	PLNT SYM3	FIELD	NO	PJRP	YR RC	NUM PLTS	SUR PCT	FOL HT	FOL	ADJ	ADPT	STAT

*	NJ	055	ANTLER-TONKA	SICL	2	77	FRDERTERT MALTING CO	478009	SYRE80	VD82006	SDIV	*85			69	.4	.4	7		5 I
*	NJ	056	ANTLER-TONKA	SICL	2	77	FRDERTERT MALTING CO	478009	SYRE80	VD82006	SDIV	*85			59	.4	.4	7		5 I
*	NJ	056	ANTLER-TONKA	SICL	2	77	FRDERTERT MALTING CO	478008	SYRE80	VD82006	SDIV	*86			70	.4	.3	7		5 I
*	NJ	056	FARGO	SIC	2	77	K FLEISCHHAUR	477392	ACGI	VD85008	WIND	*85		80	38	.1	.5	5		3 I
*	NJ	056	FARGO	SIC	2	77	K FLEISCHHAUR	476382	CEOC	VD85008	WIND	*85		39	67	1.3	.2	5		I
*	NJ	056	FARGO	SIC	2	77	K FLEISCHHAUR	9011850	GLSI80	VD85008	WIND	*85		99	72	1.3	.3	5		I
*	NJ	056	GARDENA-GLYNDOON	SIL	2	81	T HOGNESS	9011850	GLSI80	VD85013	WIND	*85		44	91	2.0	1.0	3		A
*	NJ	056	GARDENA-GLYNDOON	SIL	2	81	T HOGNESS	9011850	GLSI80	VD85013	WIND	*86		44	95	5.0	1.3	3		5 A
*	NJ	056	GARDENA-GLYNDOON	SIL	2	81	K CARPENTER	9011850	GLSI80	VD85028	WIND	*85		66	88	2.5	1.0	3		5 A
*	NJ	055B	GARDENA-GLYNDOON	SIL	2	81	K CARPENTER	9011850	GLSI80	VD85028	WIND	*86		66	83	3.2	1.7	5		5 A
*	NJ	055B	FORMAN-AASTAD	L	2	81	L BRASH	9011850	GLSI80	VD85029	WIND	*85		50	94	1.5	.5	5		5 A
*	NJ	055B	FORMAN-AASTAD	L	2	81	L BRASH	9011850	GLSI80	VD85029	WIND	*86		50	90	4.3	1.3	3		5 A
*	NJ	053B	PARSHALL	FSL	3	13	R COREY	476382	CEOC	VD86011	WIND	*86		100	90	.9	.5	5		A
*	NJ	053A	CAVDJR-CRESBARD		3	23	R OLSON	469225	FRPE	VD86003	SDIV	*86		332	85	2.8		3		A
*	NJ	055A	GARDENA	SIL	3	79	C HAGEN	477392	ACGI	VD85024	WIND	*85		40	95	1.4	1.0	3		A
*	NJ	055A	GARDENA	SIL	3	79	C HAGEN	477392	ACGI	VD85024	WIND	*86		40	100	2.5	1.5	1		1 A
*	NJ	055	HECLA	LFS	3	79	A SNELL	9006073	PRPA5	VD86005	WLOF	*86		60	90	2.0	.2	5		A
*	NJ	055A			3	101	D CLARK	459225	FRPE	VD86010	WIND	*86		250	90	1.5	.4	5		A
*	NJ				4	15	B GERESZEK	9005893	FRPE	VD81007		*85			70	.5	4.5	7		5 I
*	NJ	054	BRYANT	SIL	4	15	B GERESZEK	9005893	FRPE	VD81007		*85			70	.5	4.5	7		5 I
*	NJ	054	BRYANT	SIL	4	29	V BEITELSPACHER	476382	CEOC	VD86012	WIND	*86		50	95	1.6	.5	3		A
*	NJ	053	WILLIAMS	L	4	29	V BEITELSPACHER	476382	CEOC	VD86016	WIND	*86		50	95	1.5	.5	3		A
*	NJ	053B	WMS	L	4	47	R ERBELE	478004	PYUS80	VD82008		*86			55	.6	.4	3		5 I
*	NJ	053B	WMS	L	4	47	B VOLK	478004	PYUS80	VD82009		*85			95	8.7	3.3	1		1 I
*	NJ	053B	WMS	L	4	47	B VOLK	478004	PYUS80	VD82009		*85			95	8.7	3.3	1		1 I
*	NJ	053B	WMS	L	4	47	B VOLK	478004	PYUS80	VD82009		*86			95	9.4	7.2	5		3 I
*	NJ	053B	WILLIAMS	L	4	47	J SILBERNAGEL	477392	ACGI	VD85002	WIND	*85		50	90	.2	1.5	3		3 A
*	NJ	053B	WILLIAMS	L	4	47	J SILBERNAGEL	477392	ACGI	VD85002	WIND	*86		50	35	.3	.2	3		3 A
*	NJ	054	MORTON	SIL	4	55	H HENKE	477392	ACGI	VD85015	WIND	*85		20	100	3.0	1.5	3		3 A
*	NJ	054	MORTON	SIL	4	55	H HENKE	477392	ACGI	VD85015	WIND	*86		20	100	3.4	4.0	3		3 A
*	NJ	054	MORTON	SIL	4	55	H HENKE	9011850	GLSI80	VD85015	WIND	*85		30	93	2.5	.5	3		3 A
*	NJ	054	MORTON	SIL	4	55	H HENKE	9011850	GLSI80	VD85015	WIND	*85		30	92	2.6	2.3	3		3 A
*	NJ	054	WILLIAMS	L	4	55	L GULLICKSON	476382	CEOC	VD85017	WIND	*85		125	25	2.0	.7	5		7 A
*	NJ	054	WILLIAMS	L	4	55	L GULLICKSON	476382	CEOC	VD85017	WIND	*86		125	91	1.6	.3	3		3 A
*	NJ	055B	BARNES-SVEA		4	93	K SCOTT	9011850	GLSI80	VD85021	WIND	*85		98	94	2.5		1		1 A
*	NJ	055B	BARNES-SVEA		4	93	K SCOTT	9011850	GLSI80	VD85021	WIND	*86		98	30	1.3		9		5 A

A SUMMARY OF WOODY FIELD PLANTINGS IN NORTH DAKOTA
11/04/1987

ST	MLRA	SOIL SERIES	TEXT	AREA	NUM	COOPERATOR	ACCN	001	002	502	517	699	518	532	552	553	525	627	713						
ST	MLRA	SOIL SERIES	TEXT	AREA	NUM	COOPERATOR	ACCN	001	002	PLVT	SYMB	PLNT	NO	PJRP	RC	YR	NUM	PLTS	SUR	PCT	HT	FD	WID	ADPT	STAT
NJ	055B	BARNES			4	33	V	HOCHHALTER		9011850	GLSI80	VD85022	WIND	*85	50	100	1.5	1	1	A					
NJ	0553	BARNES			4	33	V	HOCHHALTER		9011850	GLSI80	VD85022	WIND	*86	50	86	1.8	5	3	A					
NJ	054	ARNEGARD	L		5	11	N	KRINKE		469225	FRPE	VD82010	SOIV	*85		98	2.7	.8	1	I					
NJ	054	ARNEGARD	L		5	11	V	KRINKE		469226	FRPE	VD82010	SOIV	*85		98	2.7	.8	1	I					
NJ	054	ARNEGARD	L		5	11	V	KRINKE		469225	FRPE	VD82010	SOIV	*86		93	4.1	3.3	5	I					
NJ	058D	VEBAR	SL		5	11	F	FISCHER		9011850	GLSI80	VD85007	WIND	*85	60	83	1.4	.4	3	A					
NJ	058D	VEBAR	SL		5	11	F	FISCHER		9011850	GLSI80	VD85007	WIND	*86	60	77	2.8	1.0	1	A					
NJ	054	75 STRAW	L		5	25	KILLDEER	PARK BOARD		476982	CEOC	VD85010	WIND	*85	40	5	1.5	.2	3	I					
NJ	054	75 STRAW	L		5	25	KILLDEER	PARK BOARD		476982	CEOC	VD85010	WIND	*86	40	40			1	I					
NJ	054	BELFIELD-SAVAGE	SICL		5	25	J	WERRE		9006073	PRPA5	VD86002	WIND	*86	52	95	3.2	.1	3	A					
NJ	054	FARLAND	SIL		5	25	A	SKACHENKO		476982	CEOC	VD86014	WIND	*86	210	90	1.8	.1	3	A					
NJ	054	FARLAND	SIL		5	25	A	SKACHENKO		476982	CEOC	VD86015	WIND	*86	75	90	1.9	.1	3	A					
NJ	054	VEBAR-PARSHALL	FSL		5	25	G	KULISH		476982	CEOC	VD86017	WIND	*86	40	95	2.2	.5	3	A					
NJ	054		SIL		5	33	J	NOLL		9011850	GLSI80	VD85016	WIND	*85	14	100	1.5		1	3	A				
NJ	054		SIL		5	33	J	NOLL		9011850	GLSI80	VD85016	WIND	*86	14	100			1	3	A				
NJ	054		SIL		5	33	R	ZOOK		9011850	GLSI80	VD85018	WIND	*85	20	100	1.5		1	3	I				
NJ	054	VELVA	FSL		5	37	A	EHMANTRAUT		9011850	GLSI80	VD85012	WIND	*85	50	35	1.4	.5	5	3	I				
NJ	054	VELVA	FSL		5	37	A	EHMANTRAUT		9011850	GLSI80	VD85012	WIND	*86	50	10			3	3	I				
NJ	054	CHAMA BELFIELD A	SILL		5	41	F	DILSE		9011849	FRPE	VD82016		*85	30	4.5	3.5		7	3	I				
NJ	054	CHAMA BELFIELD A	SILL		5	41	F	DILSE		9011849	FRPE	VD82016		*85	50	4.5	3.5		7	3	I				
NJ	054	CHAMA BELFIELD A	SILL		5	41	F	DILSE		9011849	FRPE	VD82016		*86	45	3.5	2.5		7	5	I				
NJ	054	CHAMA	SIL		5	41	S	NIELSEN		477992	ACGI	VD85011	WIND	*85	40	45	.0	.0	1	3	A				
NJ	054	CHAMA	SIL		5	41	S	NIELSEN		477992	ACGI	VD85011	WIND	*86	40	85	2.0	.5	1	3	A				
NJ	054	BELFIELD	SIL		5	41	G	GUSSEY		9011850	GLSI80	VD85019	WIND	*85	25	87			5	3	A				
NJ	054	BELFIELD	SIL		5	41	P	GULLICKSON		9011850	GLSI80	VD85020	WIND	*85	25	100			3	3	A				
NJ	054	BELFIELD	SIL		5	41	P	GULLICKSON		9011850	GLSI80	VD85020	WIND	*86	25	84	2.5	1.5	1	3	A				
NJ	053A	MAX	L		5	105	V	MARMON		469226	FRPE	VD82017	SOIV	*85		90	2.3	.1	6	3	I				
NJ	053A	MAX	L		5	105	V	MARMON		469225	FRPE	VD82017	SOIV	*85		90	2.3	.1	6	3	I				
NJ	053A	MAX	L		5	105	V	MARMON		469226	FRPE	VD82017	SOIV	*86		90	3.0	.1	5	3	I				
NJ	053	WILLIAMS	L		5	105	E	JORGENSEN		476982	CEOC	VD85014	WIND	*85	21	80	1.4		3	3	A				
NJ	053	WILLIAMS	L		5	105	E	JORGENSEN		476982	CEOC	VD85014	WIND	*86	21	90	2.0	.9	1	3	A				
NJ					5	81	U.	HOISTAD		476982	CEOC	VD70011	WVBR	*81	50		1.1	.3	3	3					
NJ	055				6	81	J.	WUCHERPFEFFENIG		476982	CEOC	VD74003	WVBR	*81	254		.2	.2	9						
NJ	055				5	81	R.	BERGH		476982	CEOC	VD74006	WVBR	*81	485		.7	.5	1	3					
NJ	054	TALLY			7	11	N.	KRINKE		476982	CEOC	VD72033	WVBR	*81	175		.9	.7							
NJ	054	MORTON			7	41	R.	SORENSEN		476982	CEOC	VD67048	WVBR	*81	25	44	1.4	1.2	2	5					

A SUMMARY OF *CARDAN* GREEN ASH FIELD PLANTINGS IN NORTH DAKOTA
11/09/1987

* 504	506	507	509	711	505	503	001	502	517	699	518	532	552	553	525	527	713
ST	MLRA	SOIL SERIES	SOIL-ADM	TEXT AREA	NUM	COOPERATOR	ACCN NUMBER	FIELD PLVT NO	PURP RC	YR	PLTS	SUR PCT	FOL HT	FOL WID	WDC	ADPT	STAT
ND	055	BARNES-SVEA	L	1	5	E WYEN	469226	VD82001	SDIN								I
ND	055	BARNES-SVEA	L	1	5	E WYEN	469226	VD82001	SDIN	*85		80	.4	2.4	7		I
ND	055	BARNES-SVEA	L	1	5	E WYEN	469226	VD82001	SDIN	*85		80	.4	2.4	7		I
ND	055	BARNES-SVEA	L	1	5	E WYEN	469226	VD82001	SDIN	*85		100	4.8	2.5	5		I
ND	055A	HAMERLY	L	1	19	V DAWLEY - SCHRADER	469226	VD83004	SDIN								A
ND	055A	HAMERLY-TONKA	SIL	1	19	3 LORENZ - MIKKELSEN	469226	VD93003	SDIN								A
ND	055A	BARNES	L	1	19	3 BROWN - R KENDALL	469226	VD83003	SDIN								A
ND	055A	BARNES	L	1	19	3 BROWN - R KENDALL	469226	VD83003	SDIN	*85		100	3.6	1.3	I	3	A
ND	055A	BARNES	L	1	19	3 BROWN - R KENDALL	469226	VD83003	SDIN	*85		100	3.6	1.3	I	3	A
ND	055A	BARNES	L	1	19	3 BROWN - R KENDALL	469226	VD83004	SDIN	*85		100	3.5	1.2	I	3	A
ND	055A	HAMERLY	L	1	19	V DAWLEY - SCHRADER	469226	VD83004	SDIN	*85		100	3.5	1.2	I	3	A
ND	055A	HAMERLY	L	1	19	V DAWLEY - SCHRADER	469226	VD83004	SDIN	*85		100	3.4	1.2	I	3	A
ND	055A	HAMERLY-TONKA	SIL	1	19	3 LORENZ - MIKKELSEN	469226	VD83005	SDIN	*85		100	3.4	1.2	I	3	A
ND	055A	HAMERLY-TONKA	SIL	1	19	3 LORENZ - MIKKELSEN	469226	VD83005	SDIN	*85		100	3.4	1.2	I	3	A
ND	055A	BARNES	L	1	19	3 BROWN - R KENDALL	469226	VD83003	SDIN	*86		98	5.0	2.0	7	3	A
ND	055A	HAMERLY-TONKA	SIL	1	19	3 LORENZ - MIKKELSEN	469226	VD83005	SDIN	*86		100	6.0	2.7	1	3	A
ND	055A	HAMERLY	L	1	19	V DAWLEY - SCHRADER	469226	VD83004	SDIN	*86							I
ND	055B	BARNES-SVEA	L	2	3	G REITEV	469226	VD82003	SDIN	*85		99	.6	.3	3	I	I
ND	055B	BARNES-SVEA	L	2	3	G REITEV	469226	VD82003	SDIN	*85		99	.6	.3	3	I	I
ND	055B	BARNES-SVEA	L	2	3	G REITEV	469226	VD82003	SDIN	*85		100	6.0	4.0	1	I	I
ND	055B	BARNES-SVEA	L	2	3	G REITEV	469226	VD82003	SDIN	*86							I
ND	055B	BARNES	L	2	39	J WOLD	469226	VD83007	SDIN								A
ND	055B	BARNES	L	2	39	J WOLD	469226	VD83007	SDIN	*85		75	.3	.8	6	3	A
ND	055B	BARNES	L	2	39	J WOLD	469226	VD83007	SDIN	*85		75	.3	.8	6	3	A
ND	055B	BARNES	L	2	39	J WOLD	469226	VD83007	SDIN	*85		75	5.0	2.5	9	3	A
ND	053A	CAVOUR-CRESBARD*	L	3	25	3 OLSON	469226	VD86003	SDIN	*86		332	2.8		3		A
ND	055A		L	3	101	J CLARK	469226	VD85010	WIND	*85		250	1.5	.4	5		A
ND	054	ARNEGARD	L	5	11	V KRINKE	469226	VD82010	SDIN								I
ND	054	ARNEGARD	L	5	11	V KRINKE	469226	VD82010	SDIN	*85		98	2.7	.8	1	1	I
ND	054	ARNEGARD	L	5	11	V KRINKE	469226	VD82010	SDIN	*85		98	2.7	.8	1	1	I
ND	054	ARNEGARD	L	5	11	V KRINKE	469226	VD82010	SDIN	*86		93	4.1	3.3	5	1	I
ND	053A	MAX	L	5	105	V MARMON	469226	VD82017	SDIN								I
ND	053A	MAX	L	5	105	V MARMON	469226	VD82017	SDIN	*85		90	2.3	.1	6	3	I
ND	053A	MAX	L	5	105	V MARMON	469226	VD82017	SDIN	*85		90	2.3	.1	6	3	I
ND	053A	MAX	L	5	105	V MARMON	469226	VD82017	SDIN	*86		90	3.0	.1	5	3	I

RATING SYSTEM 1=EXCELLENT 3=GOOD 5=FAIR 7=POOR 9=VERY POOR

Legend:

- 505 CNT NUM (FIPS County Code)
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- 517 PURP (Purpose)
- 599 YR RC (Year of record)
- 518 NUM PLTS (Number of plants)
- 532 SUR PCT (Percent survival)
- 552 FOL HT (Height at end of season)
- 553 FOL WID (Crown width at end of season)
- 525 WDC (Weed competition)
- 627 ADPT (Adaptation to site)
- 713 STAT (Status: active, inactive, terminated)

A SUMMARY OF DAHE HACKBERRY FIELD PLANTINGS IN NORTH DAKOTA
11/09/1987

ST	MLRA	SOIL	SERIES	509	711	505	503	001	502	517	693	518	532	553	525	527	713
				SOIL	ADM	CNT		ACCN	FIELD		YR	NUM	SUR	FOL	WDC	ADPT	STAT
				TEXT	AREA	VUM	COOPERATOR	NUMBER	PLNT	NO	PURP	RC	PLTS	PCT	HT	FOL	WID
*	504	506	507					476982	ND67025	JNBR	*81						
***	VD					1	IS I. ALM	476982	ND74025	JNBR	*81	210		.6	.3	9	
*	VD	053				1	IS R. HINKLE	476982	ND74026	JNBR	*81	71	77	1.2	.5	3	
*	VD	053	MANJAN	SIL		1	IS B. RISKEDAH	476982	ND83003	SDIN	*85	89	51	1.3	.7	1	A
*	VD	055B	SVEA	L		1	SI W MARCH	476982	ND85008	JIND	*85	99	67	1.3	.2	5	T
*	VD	056	FARGO	SIC		2	77 K FLEISCHAUR	476982	ND86011	JIND	*86	100	90	.9	.5	5	A
*	VD	056	FARGO	SIC		2	77 K FLEISCHAUR	476982	ND86012	JIND	*86	50	95	1.6	.5	3	A
*	ND	053B	PARSHALL	FSL		3	IS R COREY	476982	ND85017	JIND	*85	125	25	2.0	.7	5	A
*	ND	054	BRYANT	SIL		4	29 N BEITELSPACHER	476982	ND85010	JIND	*86	40	5	1.5	.2	3	T
*	VD	054	BRYANT	SIL		4	29 N BEITELSPACHER	476982	ND85014	JIND	*86	210	90	1.8	.1	3	A
*	VD	054	WILLIAMS	L		4	55 L GULLICKSON	476982	ND85015	JIND	*86	75	90	1.9	.1	3	A
*	VD	054	WILLIAMS	L		4	65 L GULLICKSON	476982	ND85017	JIND	*86	40	95	2.2	.5	3	A
*	ND	054	75 STRAD	L		5	25 KILLDEER PARK BOARD	476982	ND85014	JIND	*85	21	80	1.4	.3	3	A
*	VD	054	75 STRAD	L		5	25 KILLDEER PARK BOARD	476982	ND70011	WNBR	*81	50	90	2.0	.8	1	A
*	ND	054	FARLAND	SIL		5	25 A SKACHENKO	476982	ND74003	WNBR	*81	254		.2	.2	3	
*	VD	054	FARLAND	SIL		5	25 A SKACHENKO	476982	ND74006	WNBR	*81	485		.7	.6	1	3
*	VD	054	VEBAR-PARSHALL	FSL		5	25 G KULISH	476982	ND72033	JNBR	*81	175	44	.9	.7		
*	VD	053	WILLIAMS	L		5	105 E JORGENSEN	476982	ND67048	WNBR	*81	25		1.4	1.2	2	5
*	VD	053	WILLIAMS	L		5	105 E JORGENSEN	476982									
*	ND					6	81 U. HOISTAD	476982									
*	VD	055				6	81 J. WUCHERPFEVNIIG	476982									
*	VD	055				6	81 R. BERGH	476982									
*	VD	054	TALLY			7	11 N. KRINKE	476982									
*	VD	054	MORTON			7	41 R. SORENSON	476982									

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- 532 SUR PCT (Percent survival)
- 552 FOL HT (Height at end of season)
- 553 FOL WID (Crown width at end of season)
- 525 WDC (Weed competition)
- 627 ADPT (Adaptation to site)
- 713 STAT (Status: active, inactive, terminated)

A SUMMARY OF NJ-1879 (9011850) HONLY-OCJST IN NORTH DAKOTA
11/12/1987

* 504	506	507	509	711	505	503	001	502	517	699	518	532	552	553	525	527	713
ST	MLRA	SOIL SERIES	SOIL AYM	TEXT AREA	NUM	CNT	ACCN	FIELD	PURP	YR	PLTS	SUR	FOL	FOL	WDC	ADPT	STAT
VD	056	ZELL-LAJELLE	SIL	1	35	CITY OF GRAND FORKS	9011850	ND85031	WIND	*85	80	93	2.1	.5	3	3	A
VD	056	ZELL-LAJELLE	SIL	1	35	CITY OF GRAND FORKS	9011850	VD85031	WIND	*86	80	56	4.0	1.9	5	3	A
VD	056	FARGO	SIC	2	77	K FLEISCHAU	9011850	ND85008	WIND	*85	99	72	1.3	.3	5		T
VD	056	FARGO	SIC	2	77	K FLEISCHAU	9011850	ND85008	WIND	*85	99	72	1.3	.3	5		T
VD	055B	GARDENA-GLYNDON	SIL	2	81	K CARPENTER	9011850	ND85028	WIND	*85	66	88	2.5	1.0	3	5	A
VD	055H	FORMAN-AASTAD	L	2	91	L BRASH	9011850	ND85029	WIND	*85	50	94	1.5	.5	5	5	A
VD	056	GARDENA-GLYNDON	SIL	2	81	T HOGNESS	9011850	ND85013	WIND	*85	44	91	2.0	1.0	3		A
VD	055B	FORMAN-AASTAD	L	2	81	L BRASH	9011850	ND85029	WIND	*86	50	90	4.3	1.3	3	5	A
VD	055B	GARDENA-GLYNDON	SIL	2	81	K CARPENTER	9011850	ND85028	WIND	*86	66	83	3.2	1.7	5	5	A
VD	056	GARDENA-GLYNDON	SIL	2	81	T HOGNESS	9011850	ND85013	WIND	*86	44	95	5.0	1.8	3	5	A
VD	054	MORTON	SIL	4	65	H HENKE	9011850	ND85015	WIND	*85	30	93	2.5	.5	3	3	A
VD	054	MORTON	SIL	4	65	H HENKE	9011850	VD85015	WIND	*86	30	92	2.6	2.3	3	3	A
VD	055B	BARNES-SVEA	SIL	4	93	K SCOTT	9011850	VD85021	WIND	*85	98	94	2.5		1	1	A
VD	055B	BARNES	SIL	4	93	V HOCHHALTER	9011850	VD85022	WIND	*85	50	100	1.5		1	1	A
VD	055B	BARNES-SVEA	SIL	4	93	K SCOTT	9011850	VD85021	WIND	*86	98	30	1.3		9	5	A
ND	055B	BARNES	SIL	4	93	V HOCHHALTER	9011850	VD85022	WIND	*86	50	86	1.8		5	3	A
VD	058D	VEBAR	SL	5	11	F FISCHER	9011850	ND85007	WIND	*85	60	83	1.4	.4	3		A
ND	058D	VEBAR	SL	5	11	F FISCHER	9011850	ND85007	WIND	*85	60	77	2.8	1.0	1	1	A
VD	054		SIL	5	33	R ZOCK	9011850	ND85018	WIND	*85	20						T
VD	054		SIL	5	33	J NOLL	9011850	ND85016	WIND	*85	14	100	1.5		1	3	A
VD	054		SIL	5	33	R ZOCK	9011850	ND85018	WIND	*85	20	100	1.5		1	3	T
VD	054		SIL	5	33	J NOLL	9011850	ND85016	WIND	*86	14	100			1		A
VD	054	VELVA	FSL	5	37	A EHRMANTRAUT	9011850	ND85012	WIND	*85	50	35	1.4	.5	5	3	T
ND	054	VELVA	FSL	5	37	A EHRMANTRAUT	9011850	ND85012	WIND	*86	50	10			3		T
VD	054	BELFIELD	SIL	5	41	P GULLICKSON	9011850	ND85020	WIND	*85	25	100			3		A
VD	054	BELFIELD	SIL	5	41	G GUSSEY	9011850	ND85019	WIND	*85	25	87			5	3	A
VD	054	BELFIELD	SIL	5	41	P GULLICKSON	9011850	ND85020	WIND	*86	25	84	2.5	1.5	1	3	A

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- 599 YR RC (Year of record)
- 518 NUM PLTS (Number of plants)
- 532 SUR PCT (Percent survival)
- 552 FOL HT (Height at end of season)
- 553 FOL WID (Crown width at end of season)
- 525 WDC (Weed competition)
- 627 ADPT (Adaptation to site)
- 713 STAT (Status: active, inactive, terminated)

A SUMMARY OF ND-529 (477992) AMJR MAPLE FIELD PLANTINGS IN NORTH DAKOTA
11/20/1987

504	506	507	509	711	505	503	001	502	517	699	518	532	552	553	525	627	713
ST	MLRA	SOIL SERIES	SOIL ADM	TEXT AREA	NUM	COOPERATOR	ACCN NUMBER	FIELD PLVT NO	PURP	RC	PLTS	SUR PCT	FOL HT	FOL WID	WDC	ADPT	STAT
ND	056	GLYNDOV	SIL	1	35	R MYRON	477992	ND85005	WIND	*85	80	88	2.5	1.8	3	3	T
ND	056	GLYNDOV	SIL	1	35	R MYRON	477992	ND85005	WIND	*86	80						T
ND	056	FARGO	SIC	2	77	K FLEISCHAUR	477992	ND85008	WIND		80						T
ND	056	FARGO	SIC	2	77	K FLEISCHAUR	477992	ND85008	WIND	*85	80	88	.1	.5	5	3	T
ND	055A	GARDENA	SIL	3	79	C HAGEN	477992	ND85024	WIND	*85	40	95	1.4	1.0	3		A
ND	055A	GARDENA	SIL	3	79	C HAGEN	477992	ND85024	WIND	*86	40	100	2.5	1.6	1	1	A
ND	053B	WILLIAMS	L	4	47	J SILBERNAGEL	477992	ND85002	WIND	*85	60	90	.2	1.5	3	3	A
ND	053B	WILLIAMS	L	4	47	J SILBERNAGEL	477992	ND85002	WIND	*85	60	95	.3	.2	3	3	A
ND	054	MORTON	SIL	4	65	H HENKE	477992	ND85015	WIND	*85	20	100	3.0	1.5	3	3	A
ND	054	MORTON	SIL	4	65	H HENKE	477992	ND85015	WIND	*86	20	100	3.4	4.0	3	3	A
ND	054	CHAMA	SIL	5	41	S NIELSEN	477992	ND85011	WIND	*85	40	45	.0	.0	1	3	A
ND	054	CHAMA	SIL	5	41	S NIELSEN	477992	ND85011	WIND	*86	40	85	2.0	.5	1	3	A

RATING SYSTEM 1=EXCELLENT 3=GOOD 5=FAIR 7=POOR 9=VERY POOR

Legend:

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- 502 FIELD PLNT NO (Field planting number: state, year planted, sequence)
- 517 PURP (Purpose)
- 599 YR RC (Year of record)
- 518 NUM PLTS (Number of plants)
- 532 SUR PCT (Percent survival)
- 552 FOL HT (Height at end of season)
- 553 FOL WID (Crown width at end of season)
- 525 WDC (Weed competition)
- 627 ADPT (Adaptation to site)
- 713 STAT (Status: active, inactive, terminated)

A SUMMARY OF ND-14 HARBIN PEAR (PYRUS JESSURIENSIS) FIELD PLANTINGS IN NORTH DAKOTA
11/09/1987

504	506	507	509	711	505	503	001	502	517	699	518	532	552	553	525	527	713
ST	ALRA	SOIL SERIES	SOIL	ADM	CNT		ACCN	FIELD	PURP	RC	PLTS	SUR	FOL	FOL	WDC	ADPT	STAT
			TEXT	AREA	NUM	COOPERATOR	NUMBER	PLNT	NO			PCT	HT	WID			
ND	0558	HAMERLY-SVEA	L	2	3	M HENDRICKS	478004	ND82004	SDIN								I
ND	0558	HAMERLY-SVEA	L	2	3	M HENDRICKS	478004	ND82004	SDIN	*85		40	2.8	.1	7	7	I
ND	0558	HAMERLY-SVEA	L	2	3	M HENDRICKS	478004	ND82004	SDIN	*85		40	2.8	.1	7	7	I
ND	0558	HAMERLY-SVEA	L	2	3	M HENDRICKS	478004	ND82004	SDIN	*86		40	1.2	1.0	5	9	I
ND	056	ANTLER-TONKA	SICL	2	77	FROEDTERT MALTING CO	478004	ND82006	SDIN								I
ND	056	ANTLER-TONKA	SICL	2	77	FROEDTERT MALTING CO	478004	ND82006	SDIN	*85		72	7.5	3.4	7	5	I
ND	056	ANTLER-TONKA	SICL	2	77	FROEDTERT MALTING CO	478004	ND82006	SDIN	*85		72	7.5	3.4	7	5	I
ND	056	ANTLER-TONKA	SICL	2	77	FROEDTERT MALTING CO	478004	ND82006	SDIN	*86		75	.8	.4	7	5	I
ND	053	WILLIAMS	L	4	47	R ERBELE	478004	ND82008									I
ND	0538	WMS	L	4	47	B VOLK	478004	ND82009									I
ND	0538	WMS	L	4	47	B VOLK	478004	ND82009		*85		95	8.7	3.8	1	1	I
ND	0538	WMS	L	4	47	B VOLK	478004	ND82009		*85		95	8.7	3.8	1	1	I
ND	0538	WMS	L	4	47	B VOLK	478004	ND82009		*86		95	9.4	7.2	5	3	I
ND	053	WILLIAMS	L	4	47	R ERBELE	478004	ND82008		*86		65	.6	.4	3	5	I

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- 627 ADPT (Adaptation to site)
- 713 STAT (Status: active, inactive, terminated)

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Long Range Plan for Field Plantings

Species: Prunus padus var. commutata Dipp.

Common name: European birdcherry, mayday.

Accession number: SD-131, 6073T.

Purpose of field plantings: Evaluated this for use as a medium tree component of multiple row field and farmstead shelterbelts, single row field windbreaks, wildlife plantings and recreational area developments. Provides food and nesting sites for song birds and other wildlife. Non-suckering habit should be advantageous as a substitute for chokecherry.

Literature review and background information: Mayday is native to Europe and Asia. This shrubby, rounded tree may reach a height of 30 feet. Nonpersistent fruit is small, black, about 1/4 inch across, ripening in July. Branches are low and ascending. One of the first trees to leaf out in the spring. Black knot disease is considered a limiting factor for the species, especially in Minnesota. Root stocks are compatible with chokecherry scion wood. It is hardy in the Dakotas and is non-suckering.

Seed of SD-131 was collected in 1964 from one or more trees on the Oscar Hobbie farm three miles south of the Brookings County line in Moody County near Flandreau, South Dakota. This 1952 planting was established with stock from the Gurney Nursery, Yankton, South Dakota. This and other similar plantings in South Dakota were thought to trace to early introductions by J. L. Budd, Iowa State College, from eastern Siberia via the Imperial Botanical Gardens of Russia. It has performed well in Field Evaluation Plantings in North Dakota, South Dakota and Minnesota.

Duration of field plantings: 10 years.

Standard of comparison: common chokecherry.

Approximate size of field plantings: Minimum of 25 trees per entry.

Location of field plantings: All MLRAS in North Dakota, South Dakota and Minnesota. Selected sites in Iowa, Wisconsin, Nebraska, Montana, Kansas and Wyoming.

Site selection: Recommended for planting on the soils in windbreak suitability groups 1-6. Performs best on moist, moderately well drained to well drained clay loams or sandy soils.

Evaluations: Complete evaluations as required by PMS on Form SCS-ECS-10, Evaluation of Woody Field Plantings.

Summary results: Results will be summarized when trials are complete.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Long Range Plan for Field Plantings

Species: Helianthus maximiliani Shrad.

Common name: maximilian sunflower.

Accession number: ND-3959, 35964T.

Purpose of field plantings: Evaluate this selection for use in wildlife habitat plantings, range seedings, surface mine reclamation or beautification of transportation corridors and recreational area developments. Stiff upright stems may have potential as vegetative wind barriers. A highly palatable and nutritious livestock forage. Seeds are heavily utilized by birds and other wildlife.

Literature review and background information: Maximilian sunflower is a native, perennial, warm season forb. It grows upright singly or in tight colonies, spreading by seed and heavy rootstalks. Stem heights reach 3-6 feet with conspicuous yellow flower clusters arising on short flower stalks from the leaf axils. Flowers may be present from July through September. It is found in the plains from Saskatchewan and Manitoba south to Missouri and Texas and in some eastern states. Although more abundant in eastern Dakotas than western, it is found along streams, near springs and wet areas in the west. There are approximately 225,000 seeds/pound.

The origin of this accession is from native sites in Grant, LaMoure and Cavalier Counties, North Dakota; Marshall County, South Dakota and Big Stone County, Minnesota. ND-3959 is a composite of five accessions selected on the basis of four years favorable performance in comparison to 52 other accessions from the Dakotas and Minnesota. Criteria for selections included maturity, plant size, vigor, leafiness, number of stems and susceptibility to sunflower rust. Flowering and maturity averages 2 weeks earlier than selections from southern and central South Dakota. Height is variable but may exceed 4.5 feet under optimum conditions or cultivations.

Duration of field plantings: 4 to 5 years.

Standard of comparison: 'Prairie Gold' maximilian sunflower.

Approximate size of field plantings: Minimum size for range and pasture plantings is five acres and one-half acre for critical area, wildlife, roadside and similar plantings.

Location of field plantings: All MLRAS in North Dakota, MLRAS 58D, 63A (northern half) in South Dakota, MLRAS 56, 57, 88, 90, 91, 92, 93, 94A, and 94B in Minnesota.

Site selection: Maximilian sunflowers prefer moist sites and heavier soils, particularly overflow areas, swales, streambanks, ravines and roadside ditches. Commonly associated with big bluestem communities.

Evaluations: Complete evaluations as required by PMS on Form SCS-ECS-11, Evaluation of Herbaceous Field Plantings.

Summary results: Results will be summarized when trials are complete.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Long Range Plan for Field Plantings

Species: Helianthus maximiliani Shrad.

Common name: maximilian sunflower.

Accession number: ND-3651, 8065T.

Purpose of field plantings: Evaluate this selection for use in wildlife habitat plantings, range seedings, surface mine reclamation or beautification of transportation corridors and recreational area developments. Stiff upright stems may have potential as vegetative wind barriers. A highly palatable and nutritious livestock forage. Seeds are heavily utilized by birds and other wildlife.

Literature review and background information: Maximilian sunflower is a native, perennial, warm season forb. It grows upright singly or in tight colonies, spreading by seed and heavy rootstalks. Stem heights reach 3-6 feet with conspicuous yellow flower clusters arising on short flower stalks from the leaf axils. Flowers may be present from July through September. It is found on the plains from Saskatchewan and Manitoba south to Missouri and Texas and in some eastern states. Although more abundant in Minnesota and the eastern Dakotas, it is found along streams, near springs and wet areas in the western Dakotas. There are approximately 225,000 seeds/pound.

The origin of this accession is from a silty overflow site in Hughes County, South Dakota. Selected on favorable performance in comparison to 52 other accessions collected in the Dakotas and Minnesota. Criteria for selection included maturity, plant size, vigor, leafiness, number of stems and susceptibility to sunflower rust. Flowering and maturity averages 2 weeks later than selections from North Dakota. Height exceeded 6 feet under cultivation.

Duration of field plantings: 4 to 5 years.

Standard of comparison: 'Prairie Gold' maximilian sunflower.

Approximate size of field plantings: Minimum size for range and pasture plantings is five acres and one-half acre for critical area, wildlife, roadside and similar plantings.

Location of field plantings: All MLRAS in South Dakota; MLRAS 90, 91, 94, 102A, 102B, 103, 104, and 105 in Minnesota; MLRAS 54,

53B (southern half), 55B (southern half), and 56 (southern half) in North Dakota.

Site selection: Prefers deep, fertile lowland, moist sites. Particularly overflow areas, swales, streambanks, ravines and roadside ditches. Commonly associated with big bluestem communities.

Evaluations: Complete evaluations as required by PMS on Form SCS-ECS-11, Evaluation of Herbaceous Field Plantings.

Summary results: Results will be summarized when trials are complete.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Long Range Plan for Field Plantings

Species: Elymus giganteus Vahl.

Common Name: mammoth wildrye

Accession Number: ND-691, PI-313965

Purpose of Field Plantings: This selection will be evaluated for use as vegetative barriers or windbreaks. Course stem and foliage remain upright in winter and may also prove useful for wildlife food and cover. Its stout creeping habit has potential for stabilizing sand or critical areas.

Literature Review and Background Information: Mammoth wildrye is a tall course, introduced perennial grass, spreading from stout, vigorous rhizomes. Sessile spikelets make up a long dense spike supported by a thick, stiff culm. It is considered moderately palatable to grazing animals. This species can vary in growth from short, slender stemmed plants to thick robust plants up to 6 feet tall depending on moisture. Occasionally, it is grown as an ornamental. It is native to Siberia.

Increase of ND-691 was initiated from vegetative plugs planted in the spring of 1981 after 3 years of initial evaluation. This selection was first received in 1971 from Plant Introduction Station 59, Pullman, Washington which obtained the seed from Russia. This species appears adapted to the cold and droughty conditions of North Dakota. Insect and disease problems appear slight.

Duration of Field Plantings: 4 to 5 years.

Standard of Comparison: Volga mammoth wildrye, and T-16187 mammoth wildrye.

Approximate Size of Field Plantings: Minimum size for pasture is five acres and one half acre for critical area, wildlife, roadside and similar plantings.

Location of Field Plantings: all MLRAS in North Dakota, South Dakota, and Minnesota. Selected sites in Montana, Wyoming, Nebraska, and Kansas.

Site Selection: Adapted to deep sands, sandy loam, droughty porous soil (not especially adapted to gravels). Has exhibited moderate salt tolerance in some clayey saline soils.

Evaluation: Complete evaluations as required by PMS on SCS-ECS-11, Evaluation of Herbaceous Field Plantings.

Summary of Results: Results will be summarized when trials are complete.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Long Range Plan for Field Plantings

Species: Gleditsia triacanthos L.

Common name: Honeylocust.

Accession number: ND-1879, MDN-10435, 11850T.

Purpose of field plantings: Evaluate this selection for use as a tall or medium tree component of multiple row field and farmstead windbreaks and recreational area developments. It also has potential for wildlife habitat and natural area plantings.

Literature review and background information: Honeylocust is a medium to tall, fast growing, drought resistant tree (18-50 feet). It is adapted to a wide range of soils and can withstand alkaline soils. This species is noted for its zigzag twigs, large 2 to 4 inch thorns and fine textured compound leaves. Its fruit is a large bean shaped pod. Selections can be obtained which are thornless. Winter injury is common in the central and northern areas of South Dakota and all of North Dakota on seedlings grown from poorly adapted seed sources.

ND-1879 is a source selection based on 45 years of performance at the USDA, ARS Station, Mandan, North Dakota and comparison with other locally tested accessions, this accession differs morphologically from common honeylocust. Branches of the parent trees are nearly thornless. The leaflets are slightly smaller, less ellipic and rounded. It appears more winter hardy in North Dakota and South Dakota than seed sources originating from the nearest native sites in northeastern South Dakota and northern Minnesota. Has performed well in most Field Evaluation Plantings in North Dakota, South Dakota and Minnesota.

Duration of field plantings: 10 years.

Standard of comparison: common honeylocust, green ash, manchurian crabapple, Russian olive.

Approximate size of field plantings: Minimum of 25 trees per entry.

Location of field plantings: All MLRAS in South Dakota; MLRAS 53B, 54, 55B, 56 (southern half), 58C; in North Dakota; MLRAS 56 (southern half), 57, 88, 90, 91, 94, 102A, 102B, 103, 104, and 105 in Minnesota. Selected sites in Nebraska, Kansas, Wyoming and Montana.

Site selection: Adapted to moist, well drained bottomlands and limestone soils. Tolerates drought, high PH and salt.

Evaluations: Complete evaluations as required by PMS on Form SCS-ECS-10, Evaluation of Woody Field Plantings.

Summary results: Results will be summarized when trials are complete.

NORTH DAKOTA SEED INCREASE AND PRODUCTION - 1986

Area	Field Office	Cooperator, Address	Species	Acres &		Quantity	Estimated \$ Value
				Yr. Pltd.			
01	Devils Lake	USDI, F&WS, Devils Lake, ND (701-662-2924)	NDG-965-98 switchgrass	5 (1978)		0	
			'Forestburg' switchgrass	5 (1978)		0	
			NDG-4 big bluestem	13 (1984)			
			'Forestburg' switchgrass	31 (1980)		0	
			NDG-965-98 switchgrass	42 (1980)		0	
		Robert Blegen Churches Ferry, ND (701-466-2518)	NDG-965-98 switchgrass	8 (1981)		750	7,500
			NDG-4 big bluestem	8 (1983)		925	11,100
		Mike Rohrer Churches Ferry, ND (701-466-2854)	NDG-965-98 switchgrass	3 (1982)		400	4,000
		Ray Sletteland Churches Ferry, ND	NDG-965-98 switchgrass	30 (1983)		1600	16,000
		Larry Anderson Devils Lake, ND	NDG-965-98 switchgrass	40 (1983)		3410	34,100
		Fred Schumacher Kindred, ND (701-428-3839)	'Lodorm' green needlegrass	60		8000	60,000
			NDG-965-98 switchgrass	8 (1982)		2400	24,000
			Mandan 759 pub. wheatgrass	23 (1981)		9450	61,425
			'Rodan' western wheatgrass	24 (1983)		1900	14,250
			NDG-4 big bluestem	(1986)		0	
		Agron. Seed Farm Casselton, ND (701-347-4743)	'Nordan' crested wheatgrass	1.5		130	455
			'Lodorm' green needlegrass	3		860	6,450
			'Vinall' Russian wildrye	2		0	

NORTH DAKOTA SEED INCREASE AND PRODUCTION - 1986

Area	Field Office	Cooperator, Address	Species	Acres &		Estimated \$ Value
				Yr. Pltd.	Quantity	
02	Forman	John Wentworth	NDG-965-98 switchgrass	36 (1984)	800	8,000
	Valley City	USDI, FWS Valley City, ND (701-845-3466)	NDG-965-98 switchgrass (Cass Co.)	10 (1981) 35 (1982)	751 4917	7,510 49,170
			NDG-4 big bluestem (Jamestown)	8 (1978)	0	
			'Bonilla' big bluestem (Jamestown)	3 (1971)	0	
			'Pierre' sideoats (Barnes)	15 (1983)	1000	12,500
			'Killdeer' sideoats (Steele)	20	4560	57,000
			'Forestburg' switchgrass (Cass)	10 (1981)	0	
			NDG-4 big bluestem (Cass Co.)	20 (1981)	4417	55,212
03	Bottineau	'USDI, FWS J. Clark Salyer NWR Upham, ND (701-768-2548)	NDG-965-98 switchgrass	15 (1981)	0	
			'Forestburg' switchgrass	15 (1982)	0	
			NDG-4 big bluestem	5 (1980)	0	
			NDG-4 big bluestem	10.5 (1982)	0	
			'Tomahawk' indiangrass	20 (1985)	0	
		Arvid Anderson (701-228-2398)	'Rosana' western wheatgrass	20 (1983)	210	1,575
	Towner	NDFS Nursery Towner, ND (701-537-5636)	'Oahe' hackberry		60	13
			'Sakakawea' silver buffaloberry		420	97
			'Cardan' Green ash		303	67

NORTH DAKOTA SEED INCREASE AND PRODUCTION - 1986

Area	Field Office	Cooperator, Address	Species	Acres & Yr. Pltd.	Quantity	Estimated \$ Value
04	Bismarck	USDA, SCS, PMC Bismarck, ND (701-223-8536)	'Garrison' creeping foxtail Fld E-9 (found)	1.0 (1960)	45	175
			'Pierre' sideoats grama Fld E-8 (found)	1.0 (1977)	106	1325
			'Killdeer' sideoats grama D-11 (found)	1.0 (1977)	68	850
			Mandan-759 pubescent wheatgrass Fld D-7 (found)	1.6 (1969)	145	942
			E-11 (found)	0.5 (1963)	46	299
			'Rodan' western wheatgrass Fld E-8	3.2 (1983)	136	1020
			NDG-965-98 switchgrass Fld D-11 (found)	1.0 (1961) 1.1 (1984)	245	2450
			NDG-4 big bluestem Fld D-8 (found)	1.2 (1971)	140	1750
			D-9 (found)	1.7 (1963)		
			'Bonilla' big bluestem Fld D-11 (found)	1.1 (1973)	155	1937
			E-13 (found)	0.9 (1962)		
				0.5 (1977)		
			'Forestburg' switchgrass Fld E-11 (found)	0.5 (1964)	588	5,880
			E-12 (found)	1.7 (1967)		
				0.5 (1977)		
			'Pierre' sideoats grama	10.5 (1973)	1721	20,652
			'Killdeer' sideoats grama	20.0 (1974)	5641	67,692
			NDG-965-98 switchgrass	4.0 (1973)	398	3,980
				3.0 (1981)	140	1,400

NORTH DAKOTA SEED INCREASE AND PRODUCTION - 1986

Area	Field Office	Cooperator, Address	Species	Acres & Yr. Pltd.	Quantity	Estimated \$ Value
04	Bismarck Cont'd.		'Garrison' creeping foxtail	3 (1981)	136	530
			'Rodan' western wheatgrass	17 (1983)	440	3,300
			NDG-4 big bluestem	7.5 (1985)	1040	13,000
			'Midwest' manchurian crabapple		9850	2,167
			'Sakakawea' silver buffaloberry		4475	1,029
			'Cardan' green ash		14125	3,107
			SD-131 Mayday		4300	946
			'Oahe' hackberry		12300	2,706
			'Centennial' cotoneaster		29900	8,222
			ND-14 Harbin pear		11525	2,535
			Schubert Chokecherry		35900	9,873
			'Imperial' poplar		12325	2,711
			ND-83 late lilac		60850	13,387
			ND-20 arnold hawthorn		1950	429
			ND-283 Russian almond		7875	2,087
05	Bowman		Scarlet Mongolian cherry		5900	1,209
		Henry Fischer Rhame, ND	MDN-759 Pubescent wheatgrass	20+80 (1987)	3000	19,500
		Dickinson	MDN-759 Pubescent wheatgrass	22 (1983)	2600	16,900
			MDN-759 Pubescent wheatgrass	22 (1984)	4000	26,000
			'Lodorm' green needlegrass	9 (1986)	1000	7,500
			'Nordan' crested wheatgrass	30 (1986)	6500	22,750

NORTH DAKOTA SEED INCREASE AND PRODUCTION - 1986

<u>Area</u>	<u>Field Office</u>	<u>Cooperator, Address</u>	<u>Species</u>	<u>Acres & Yr. Pltd.</u>	<u>Quantity</u>	<u>Estimated \$ Value</u>
05	Dickinson	Weiss Seed Cleaning Plant, Belfield, ND (575-4770, Belfield, ND)	Mandan-759 pubescent wheatgrass	25 (1977)	0	
		Wm. Weiss, Adm. c/o P.O. Box 641	NDG-965-98 switchgrass		0	
		Bismarck, ND 58502 (701-255-0145)	'Nordan' crested wheatgrass	110	0	
			'Vinall' Russian wildrye	15	2600	9,100
TOTAL:				<u>856 Acres</u>	<u>212,058 Seedlings</u>	<u>50,585</u>
					77,370 Pounds	<u>659,179</u> <u>709,764</u>

